

Science and Mathematics Education Centre.

An Interpretive Inquiry Into Middle School Curriculum.

Gary Thomas Guiver.

**Thesis presented for the degree of
Doctor of Philosophy
of
Curtin University of Technology.**

August 2003

Abstract.

This thesis is an interpretive inquiry which focuses on the curricular elements of a middle school program. The research project is based on the data collected from two specific classes and from five particular teachers, during the implementation phase of a middle school program. The research makes use of multiple methodologies including an empirical study, narrative accounts by teachers and students, interviews, autobiographical and biographical material, and notes from a personal journal. It was intended that the thesis create a detailed, multi-dimensional, image of the school curriculum.

Common threads evident in the data obtained from the teachers indicated that there was an element of uncertainty regarding expectations for the middle school program, a perception that there was conflict over resources, a belief that disputes about curriculum 'ownership' had impacted negatively on the program, and a degree of disappointment that the program's potential had not been fulfilled. Despite these constraints, all the teachers noted high levels of professional satisfaction and a sense of collegiality within the middle school team.

The students did not express any particular preferences regarding curriculum content, but were principally concerned about the social environment within their own home-group class and within the wider school community. A significant proportion of the students sampled commented positively on the relationships that they had developed with their peers and teachers. The findings appear to indicate that, provided that the class work is of some relevance and interest, young adolescent students are more concerned about who their teacher might be, rather than what they might actually teach.

The tensions that are inherent in the debate about the curriculum and who owns it are identified as difficulties that teachers and administrators need to address if new middle school programs are to be successfully implemented. It is a genuine issue that concerns teachers and schools, therefore, efforts should be made to find ways to ensure that debate about the curriculum takes place within an educational framework

which, initially, is separate from any discussion regarding the management and allocation of resources. It might also be helpful if the debate were, in some way, held in ‘neutral territory’, and not viewed as a matter of choice between a traditionally conservative curriculum and a radically progressive one, but perhaps something else.

The thesis concludes with a suggestion that Surrealism might be used as a device by which the integrity of the subjects, found in a traditional curriculum, may be preserved in a structure that still allows for the rich and, perhaps, the strange possibilities of an integrated program. It could be seen as a recombination or different combination of disciplines which may create a more interesting whole, however, it would still be recognizable or, at least, its components would be. Reference is made to one particular painting by Rene Magritte, “Time Transfixed” as a means of illustrating this proposition.

Acknowledgements.

I would like to acknowledge the following people who so kindly assisted me during the course of this study;

The students and teachers who participated in this inquiry, I cannot name them, but they know who they are.

Bevis Yaxley, whose encouragement, support, wisdom and companionship, I would particularly like to gratefully acknowledge. I would not have lasted the distance without his kind assistance.

Roy Pugh, who has the uncanny ability to identify relevant readings, from a huge range of sources, at exactly the right time.

And Tom Guiver, my youngest son, who figured out how to convert my statistical data into computer graphics.

Dedication.

This work is dedicated to all the students and all the teachers who have so kindly allowed me the privilege of sharing parts of their lives for over thirty years.

Table of Contents.

	Page
ABSTRACT	i
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
LIST OF APPENDICES	vii
LIST OF FIGURES	viii
PROLOGUE	1
Purposes	1
Paradigms	1
Expectations	5
Limitations	5
Ethical issues	7
CHAPTER ONE: AN ALTERNATIVE MODEL FOR WRITING CURRICULUM RESEARCH	8
Time Transfixed: A Play in Two Acts	9
Characters	10
Setting	10
The Stage	11
Act One	11
Scene One	11
CHAPTER TWO: DETERMINING THE QUESTIONS: CHOOSING THE METHODOLOGIES	37
CHAPTER THREE: THE CLASSROOM ENVIRONMENT SURVEY	56
Frequency of Responses to Classroom Environment Items for Group One	58
Student Cohesiveness	58

Teacher Support	59
Involvement	60
Investigation	61
Task Orientation	62
Co-Operation	63
Equity	64
General Observations	65
Frequency of Responses to Classroom Environment Items for Group Two	68
Student Cohesiveness	68
Teacher Support	69
Involvement	70
Investigation	71
Task Orientation	72
Co-Operation	74
Equity	76
General Observations	77

CHAPTER FOUR: VOICES FROM THE CLASSROOMS: THE STUDENTS AND TEACHERS TELL THEIR STORIES

81

CHAPTER FIVE: TOM'S STORY

100

Introduction	100
Tom's Story	101
Tom's Story: Some Reflections	111
Goals and Expectations	113
The Management of Physical Resources	115
Curriculum Development	118
Disappointments	121
Teacher Satisfaction	123
A Pause for Reflection	129

CHAPTER SIX: THE JOURNAL	129
Introduction	129
The Journal Entries	132
Organisational Issues	133
Journal Entry 1: The first professional development meeting organized and facilitated by the Principal Curriculum Officer for Science Education.	133
Journal Entry 2: Second professional development meeting	136
Journal Entry 3: Third Professional Development Meeting	138
Journal Entry 4: Meeting with Helen, the Principal to discuss the formation of a new class	141
Personal Issues	142
Journal Entry 5: First Individual Staff Meeting with Lynne	142
Journal Entry 6: Meeting with Christine	144
Journal Entry 7: Meeting with the Helen, the School Principal	146
Journal Entry 8: Individual Staff Meeting with Susan	148
Journal Entry 9: Second Individual Staff Meeting with Lynne	149
Journal Entry 10: Individual Meeting with Kerrie, a student in Susan's class	150
Journal Entry 11: Second individual staff meeting with Susan	152
Journal Entry 12: Third individual staff meeting with Lynne	153
Curricular Issues	154
Journal Entry 13: A meeting with Susan and Lynne to finalize their proposal for an integrated Science and Humanities program	154
Journal Entry 14: Individual Staff Meeting with Susan	156
Journal Entry 15: Meeting with Richard and Christine to Consolidate the Separate Elements of a Program Entitled, "Would You Kill a Spider?"	157
Journal Entry 16: Grade Seven Team Curriculum Meeting	161
Journal Entry 17: Meeting with the Head of the Science Faculty	163
The Journal: Some Observations	165
 CHAPTER SEVEN: AN INTERLUDE	 166
The Research Process	167
The Writing Process	170
Academic Writing	171

Technical Writing	172
Autobiographical and Biographical Writing	173
Reflective Writing	174
Dialogical Writing	174
Some Findings	175
A Perception and a Suggestion	176
A Pause for Reflection	180
EPILOGUE	182
REFERENCES	183
APPENDICES	195
Appendix 1: The Survey Instrument	195
Appendix 2: A Selection of Transcripts of Conversations with Teachers	207
Appendix 3: A Selection of Questions Used in Student Interviews	237
Appendix 4: Original Thesis Proposal	239

Prologue.

Purposes, Paradigms, Expectations, Limitations and Ethical Issues.

Purposes.

It was my intention to create a detailed multi-dimensional picture of two particular classrooms in a specific urban Australian high school during a year of significant cultural change. I proposed to do this by combining or layering a statistically-based classroom environment study, narrative accounts of teachers and students, an autobiography, reflections on the notes from my journal, and, in some respects, the contribution made by the reader. This layering may be likened to a hologram, in that each individual element may not have significant meaning on its own, like each layer or beam of light, yet when combined with similar elements might create an image that is more 'real' than any of its individual components. Like a hologram, my thesis is designed to be observed from a variety of viewpoints, where each observer will have a different view and will focus on different elements.

The inquiry may provide some clues about how we might improve the educational outcomes for young adolescent students in general; and my own students in particular. On a personal level, my research task may provide a vehicle by which I might better understand just what it is that I have been doing in my professional life for thirty years.

Paradigms.

When developing an appropriate methodology for any educational study, it is worth recalling Korzybski's axiom that,

"A map is not the territory" Korzybski (1933, p.8)

This means that, whatever research paradigm we select, no matter how appropriate it may be or how competently the inquiry is conducted, it can only give a generalized picture of reality which as Capra (1991) suggests, in epistemological terms,

Leads us to perceive that all knowledge acquired and disseminated through the rational process of intellect, sensation, and linguistics, is only an approximate representation of reality and is therefore necessarily limited. (p.4)

The use of multiple research methodologies within my inquiry necessitated the use of a multiplicity of writing styles, including academic, technical, autobiographical, biographical, and dialogical, and also, the application of a number of research paradigms.

Denzin and Lincoln (1998) suggest that research paradigms, in fact, determine what will, or will not, fall within the scope of any inquiry, and that the selection of that paradigm is predetermined by the inquirer's response to three fundamental, but interconnected, questions. They are questions about ontology, epistemology and methodology, but not necessarily in that order, for the answer to any will limit the possible answers to any other. The authors have defined the questions thus

The *ontological question*. What is the form and nature of reality, and, therefore, what is there that can be known about it?

The *epistemological question*. What is the nature of the relationship between the knower or would-be knower and what can be known?

The *methodological question*. How can the inquirer (would be knower) go about finding out whatever he or she believes can be known?

Denzin and Lincoln (1998, pp.200-201)

My inquiry relies on a number of paradigms but, in general terms, might be considered to be an amalgam. Denzin and Lincoln (1998) provide a useful table which describes the key features of four alternative inquiry paradigms. (over).

Inquiry Paradigm	Ontology	Epistemology	Methodology
Positivism	Naïve Realism-"real" reality but apprehendable.	Dualist/ Objectivist: findings true.	Experimental/ Manipulative: verification of hypothesis: chiefly quantitative methods.
Post Positivism	Critical Realism-"real" reality but only imperfectly and probabilistically apprehendable.	Modified Dualist /Objectivist; critical tradition/community; findings probably true.	Modified Experimental/ Manipulative; critical multiplism falsification of hypotheses; may include qualitative methods.
Critical Theory et al	Historical Realism-virtual reality shaped by social, political, cultural, economic, and ethnic and gender values; crystalized over time.	Transactional/ Subjectivist; value mediated findings.	Dialogical /Dialectical.
Constructivism	Relativism-local and specific constructed realities.	Transactional /Subjectivist; created findings.	Hermeneutical /Dialectical.

Adapted from Denzin and Lincoln. (1998, p.203).

The research methodologies upon which the thesis is constructed are, generally, reflected within a number of the categories described above and include:

- a quantitative survey instrument,
- qualitative research in the form of commentaries by some of the students, who were the subjects of that survey,
- the stories of some of the students who were the subjects of that survey,
- the stories of the teachers, whose students were the subjects of that survey,
- my own biographical account as grade coordinator, and reflections on notes from a journal which was kept during the period in which the events, that are the subject of the survey, occurred.

I found that I could best describe what I believed were the principal features of the study by combining elements of Denzin and Lincoln's four categories. (over)

Methodology	Ontology	Epistemology
A Positivist modified experimental and manipulative model combined with the dialogical and dialectical elements of a more Critical Theorist model.	A mixture of Critical Realism and Historical Realism.	An amalgam of Dualist Objectivist, Modified Dualist and Transactional paradigms.

If I were to return to the epistemological question, the question about the basis for claiming to know that my thesis is authentic, and by what authority I claim that knowledge. I would suggest that using a multiplicity of research paradigms, which would provide a form of triangulation, is more likely to support that claim than the use of just one.

The classroom environment instrument developed by Fraser, Fisher and McRobbie (1996), is recognized by the research community as being valid, replicable and effective. The technical processes for collation and amalgamation of data are well established, with only the interpretation of that data being open to the possibility of subjectivity on the part of the researcher. The findings of the statistical study may be used as cross-referencing with which to confirm the validity of the students' own stories and could be reversed to confirm the effectiveness of the survey instrument.

There can be no objective test of the truthfulness of the five stories recounted by the middle school teachers and the eight stories told by their students. However, as each individual is reflecting on their own experience within a shared environment and within the same time-frame, one can claim that a triangulation of coincidence may serve as a means by which one could determine the trustworthiness of the accounts. The teachers' recollections may also be compared with the stories and observations of the students who were in their classes at the same time. I do not mean this in a legal sense, like an alibi, but in general terms, where the specific detail may differ but, in meaning, the stories are the same.

Expectations.

The reader may identify some common themes running through the class surveys; voices from the classroom; Tom's story, and journal reflections. These may fall into three broad categories: organizational, curricular and personal. The young adolescent students, as one might expect, make few comments about the first two, unless directly prompted. The teachers, as one might anticipate, comment on all three. They note a feeling of working in isolation, with inadequate resources and refer to conflicts over the design and 'ownership' of the curriculum. Interestingly, they also describe, an apparent contradiction, high levels of personal professional satisfaction.

This thesis will give the reader an 'insiders' perspective on what it might have been like to be a participant in the program that is the subject of this study. The reader might expect, in a personal sense, to know the students, teachers and actors whose stories have been told. They may be able to recognize them if they were to meet them, and, possibly, enter into a rich dialogue with them.

Limitations.

The thesis should not be seen as a post-modern exploration to discover alternative models for writing educational research. Its structure (determined by the requirements of the University Thesis Committee) is firmly located in modernism, as, indeed, is the painting by the artist, Rene Magritte, which is referred to in the text.

The terms, "Surrealism" and "Curriculum" can be widely interpreted and attributed with a range of meaning.

Surrealism may loosely cover a period from about 1919 until the present. However, "Surrealism", within the context of this thesis refers specifically to the period between 1931 and 1932 which Picon (1997) describes as the period of "Object and Image." (p131), and specifically to the work of painters such as Dali, Delvaux and Magritte, the sculptor, Giacometti and the photographer, Man Ray, whose work exhibits high levels of technical skill.

“Curriculum” can be attributed with a range of meanings: a program of work; an administrative device; a system of power and influence, Hargreaves (1984); a form of discourse, Foucault (1972) or what Aoki (2003) refers to as “Living Pedagogy”

“Curriculum”, within this thesis, should be interpreted as describing the content; organizational structures; pedagogical styles and anticipated outcomes of learning programs.

The reader should be aware that there is no hierarchy, intentional or implied, in the structure. No particular chapter precedes another. The voices of the students; academic researchers; teachers; actors; popular novelists, the visual images and the scores on the questionnaires, should be seen as making an equal contribution to the work. The voices deserve to be heard, for the voices from the classroom are often silenced. Foucault (1972) would have, probably, claimed that this is because education systems, like any other hierarchy, are a form of exclusive discourse. Yet, in my experience, it is more complex than that. I do not see a global or local conspiracy, but rather that there are times when researchers do not ask the “right” questions or the “right” people; data is misinterpreted; verbal responses are misrepresented or lost in transcription; the interval between the initial research, the writing of that research in a useable form, the recommendations from that research, and the actual implementation is too great; or it is too hard, too impractical, or we just get it “wrong”, despite our best intentions.

Despite the constraints of the linear format the reader is encouraged to imagine the text as a whole that is presented simultaneously, as would the beams of light in a hologram or the separate images in one of Magritte’s paintings.

The reader may find that the work is somewhat repetitive, yet that is a feature of its construction, rather than collusion on the part of the participants. I believe that it is the themes that tend to reoccur, rather than the detail of the stories. This may, be a positive feature in that it could, perhaps, be seen as a means of confirming the significance of those themes.

I would acknowledge that some researchers might claim that the thesis is based on a very narrow sample group in that the subjects represent fifty-three students and five of their teachers. I believe, however, that the work contains a depth of detail that might have been more difficult to collect from a much larger source. Whilst one might conclude that the narrowness of the sample implies that any conclusions or suggestions would be correspondingly narrow in their application, it is worth considering Beuchner's (1991) proposition

My assumption is that the story of any one of us is in some
measure the story of us all. (p.12)

Ethical Issues.

Informed consent. All participants in this project have given their permission for the responses to questionnaires and comments made during interviews to be used in this document. The principal gave his approval for the work to proceed in the school and became an active participant in the project through ongoing conversations about teaching and learning. Students and teachers were initially allocated numbers as a form of identification at the data collection stage. However, in the document itself the numbers have been allocated random christian names from obsolete class lists, with no particular reference to gender implied. This was to guarantee the anonymity of the participants but also served as a means of 'personalizing' the text.

The setting is located in an Australian high school. However, beyond that there are no clues to its actual location, whilst the play script hints at a coastal environment it could be anywhere on the south-eastern seaboard from the South Australian border to central Queensland.

Feedback. The principal, teachers and students were kept informed of progress and regularly invited to comment on the data collected and individual approval was sought to use any data that might be considered potentially hurtful to any individual. The feedback sessions, informed by the student survey and the voices from the classroom, proved a helpful aide to discussion within the middle school team and led to a more flexible approach to student groupings and a number of modifications to the curriculum.

Chapter 1.

An Alternative Model for Writing Curriculum Research.

This thesis implies that teachers should be searching for alternative models of curriculum that encourage students to present work in creative ways, and specifically, models that involve them in the design and evaluation of their own learning programs.

Suggesting what others might do is the easy part, demonstrating that this might be feasible, in any educational context, is a different matter. It, therefore, seemed appropriate that I should indicate how this might be achieved. The thesis itself appeared to offer some possibilities in this regard and re-presenting part of it, in another genre, appeared to be a workable strategy. It was a strategy that might also provide a means of freeing myself from the formal style of writing that was constraining my efforts to explore and describe what I thought might be an alternative framework upon which to construct a curriculum. I found that the conventions of academic writing interfered with the continuity of the text and punctuated the work in ways that I would not have chosen. I therefore investigated alternative devices, not as substitutes for conventional academic forms, but, rather, as a means of augmenting them.

Creating an actual hologram rather than a metaphorical one proved to be beyond my technical ability. Paintings and drawings would need a gallery in which to exhibit them. A stage play would need actors and a theatre, and as I am not a musician, my options were, somewhat, narrowed. In the final analysis, the real choices appeared to be between film/video production, an audio presentation, or the script for one of the above. I had never written a play script before. However, that did not deter me. I read Williamson's (1980) "Travelling North" in order to gain some insights into the style, conventions and format of that genre, and whilst one might claim that I was merely substituting one convention for another, it did offer an alternative lens through which to interpret my research findings. The results of my efforts follow.

Time Transfixed



A play in two acts.

TIME TRANSFIXED

A stage play in two acts.

Characters

Mr. RENE MAGRITTE -An elderly Belgian gentleman renowned for his work in the field of Surrealist art.

Mr. THOMAS - A high school teacher in his mid-fifties.

NARRATOR - An I.T. consultant in her mid-thirties.

Setting

The play is set in present-day Australia. The action takes place in a vintage car being driven along a country road and in a harbor-side fish restaurant.

The Stage

Act one: The stage has a large back-projection screen and at centre-stage there is a 1926 Amilcar type G touring car facing the audience, in which **Mr. THOMAS** is seated. **Mr. MAGRITTE** joins him. The back-projection screen is used to create the illusion that the vehicle is traveling at a moderate speed along a country road, in the style of the Alfred Hitchcock film, “Suspicion” of 1941, in which, Cary Grant and Joan Fontaine are driving, in an open Lagonda car, along southern California coast. The **NARRATOR** is situated at stage left, near the front of the stage she is sitting in a black, leather-upholstered, ergonomic chair at a forty-five degree angle to the audience. A, lap-top, computer and telephone are on a desk beside her.

I would like to thank the following authors for their assistance:

Ken Burns, Elliot Eisner, Giles Fournier, Alfred Korzybski, Desiderius Orban, Terry Pratchett, Uwe Schneede, Michael Ware, Margaret Wheatley, and John Williamson.

ACT ONE

Scene One

It is a mild summer day. Mr. MAGRITTE, an elderly man wearing a dark blue overcoat, grey pin-striped suit and bowler hat, carrying an umbrella and briefcase, is standing outside an Australian style country hotel. There are the distinctive sounds of a vintage, side-valve four cylinder, engine the whine of straight-cut gears and gentle squeak of brakes being applied as a 1926 Amilcar Type G comes to a gradual halt. The driver, Mr. THOMAS, a bearded man in his mid-fifties, wearing blue jeans, green shirt, dark brown 'Drizabone' riding vest and black woolen 'beanie', gets out of the car and opens the passenger door.

(A 'Drizabone' is a type of oilskin coat, first developed by a Scottish immigrant, LeRoy, in the mid nineteenth century; a 'beanie' is a knitted, woolen hat.)

Mr. THOMAS: Good day, Mr. Magritte, I've been looking forward to meeting you and am delighted to act as your chauffer for the day. It was such a pleasant morning that I decided to use the old car, the journey will take a little longer, but I promise to get you to your destination on time. I'm sorry about the lack of weather protection, I repaired the hood-frame but have not yet had a new hood made, you see I try to do most restoration work myself but I'm afraid that task is really beyond my capacity, even if I did have access to an industrial sewing-machine.

Please put your briefcase and umbrella on the back seat if you wish, you should be warm enough wearing that overcoat and you should not lose your bowler-hat, as we will not be driving very quickly. I find that one of the advantages of traveling

sedately in an open car is the marvelous view one gets, so the odd draught is well worth putting up with.

Mr. MAGRITTE: (*getting into the car.*) That will be fine, by the way, please call me, Rene. Monsieur Magritte is a bit formal. I do appreciate the time and effort that you have taken to transport me in such elegant style. It's been years since I've seen an Amilcar, let alone ridden in one. Ghislain Mahy, the Belgian Circus owner, lived near us and had a huge collection of cars. I remember his son Ivan and his brother learning to drive by charging around their garden in a bright red Amilcar sports model, much to the annoyance of the neighbors.

Mr. THOMAS: (*gets into the car, presses the starter-button, depresses the clutch pedal, engages first gear and drives off*) Well what a coincidence, you see it wasn't that long ago that I read an article in The Automobile magazine about the rediscovery, in Belgium, of part of that same car collection. (1) (*he double-declutches into second gear and the transmission system develops a high-pitched whine*) There was a photograph of a 1927 model C.G.S. which appeared to be a reddish color under all the dust it's probably the same car. It looked to be pretty complete and certainly a restorable proposition. (*he engages top-gear, the engine speed drops and the gear noise abates, he relaxes back into his seat*)

Mr. MAGRITTE: It may well be the same car which would be a really weird convergence of events, that's the sort of thing that inspires me and I could make good use of in a painting one day. You are clearly interested in automobile history and restoring classic vehicles so tell me are you a mechanical engineer by profession?

Mr. THOMAS: Well actually, no, Rene, I have been a teacher for over thirty years, but find that to have a hobby or interest that is not related to my profession is quite an effective form of relaxation therapy. I have spent most of my professional life working in the areas of the Visual Arts and the Humanities, but lately have taken an interest in how the school curriculum is organized, particularly during the first two years of high school.

(1) Ware (1997, p.77)

You see, as an educator, I have always been intrigued with the way in which knowledge in the broad sense has become compartmentalized, for example, artistic, literary, and scientific and so on, and, additionally, why there then internal subdivisions like, biology, physics, and chemistry etc. You are probably aware that most schools are organized to reflect this state of affairs both in their structures and in the way their curriculum is delivered so I've become very interested in this phenomenon. It appears to only date from around the time of the Industrial Revolution for clearly during the Renaissance period Leonardo, Michelangelo, Galileo, and their contemporaries did not consider themselves to be specifically architects, artists, scientists, philosophers or astronomers. They involved themselves in a broad range of activities and were always open to new ideas, a good example being the way the English poet Milton visited Galileo, while he was under house-arrest between sixteen-thirty eight and sixteen- thirty nine, during which time they discussed the possibility that other worlds might be populated like ours.(2) It seems that science, philosophy and poetry were seen as being the same thing then. *(He double-declutches into second gear as the road starts to climb, the transmission whine returns.)*.

Mr. MAGRITTE: *(Raising his voice above the mechanical noise.)*

I agree, indeed that sort of compartmentalization was one of the constraints we Surrealists were trying to escape from. That is why our endeavors included the whole range of visual arts disciplines from sculpture to film-making and also encompassed the literary arts. In a personal way I tried to make this connection happen within my own work by experimenting with words and trying to highlight the dubious status that they had acquired for themselves. I tried to inject my consciousness of words into both my painting and writing but it was a dangerous game to play as in some cases the public and critics did not understand what I was trying to achieve, the "Treasure of Images" wasn't a pipe, it was a painting depicting a pipe, a few people had problems with that one.

(2) Evans (1998, p.21)

NARRATOR: *(A dark-haired woman in her late thirties, wearing an austere, but expensive-looking, black business suit turns to the desk beside her. She puts on her silver-rimmed spectacles, picks up the lap-top computer, manipulates some keys, and the image appears on the back-projection screen. She then removes her spectacles.)*



Rene Magritte. "The Treason of Images". 1929. Oil on canvas. 62 x 81 cms.

Los Angeles County Museum of Art collection.

Mr. THOMAS: I think I understand what you were getting at and it's interesting to note that what you were saying is very much like the axiom that is often quoted by educational researchers, you know, **the** map is not **the** territory, type of thing.

(The road has leveled off, he selects top gear, adjusts the ignition timing and the mechanical noise abates.)

Mr. MAGRITTE: Look I hope you will forgive me for mentioning this, but just about everyone misquotes that, Alfred Korzybski's actual statement in his paper on Science and Sanity, of nineteen-thirty three, should actually be, A map is not the territory. And that is only the first of his three principles of general semantics. The second being; A map does not represent **all** of a territory, and the third, A map is **self-reflexive**, in that an ideal map would include a map of the map, etc, etc, indefinitely. So if you apply that to language you get, a word is **not** what it

represents, a word does **not** represent **all** of the facts, etc, and, that language is **self-reflexive**, in the sense that it is in language that we can speak about language. (3)

Mr. THOMAS: Not at all Rene, thanks for that, you have given me something to think about that will be particularly useful when I complete my thesis about middle school curriculum development.

However, on a lighter note, I've just been thinking that it would be fun to just write the word, "pipe" and see how the critics cope with that, or even better, stand in an art gallery and say it, once, very quietly.

(They are now driving through the foothills of a mountain range; there are tree-ferns in the forested gullies to the left and glimpses of the coast to the right.)

Mr. MAGRITTE: Yes, that could really test them, but as I was saying, what I was trying to achieve was, simplicity, but, a false simplicity, within my paintings, general articles, and literary pieces. To do this I was methodical, technical and disciplined in the way I developed my work and, what appeared to be unexpected, was no mere caprice on my part. What I was trying to do was to develop in people a need to react to the stereotypical phenomena of everyday life, or, if you like, to get away from those preconceived compartments that you were describing.

Mr. THOMAS: Yes, well in that case you might be interested in the thoughts of a writer named Margaret Wheatley who suggests in her book, *Leadership and the New Science*, that it is our world views that influence the way organizations, including schools, are run. She argues that ever since Newton and Descartes, we have prided ourselves on the triumph of reason over magic. That for three centuries we've been analyzing and predicting the world with such a firm belief in cause and effect that we now rely on numbers to describe our economic health, productivity and wellbeing. She thinks that most organizations are actually still Newtonian in outlook, in that, responsibilities have been organized into functions and people into roles, and, this helps explain the proliferation of separations that has characterized not just organizations, but everything in the world during the last three hundred years.

(3) Wheatley (1992) (4) Korzybski (1933, p.8)

She sees this as the major factor leading to the breaking up of knowledge into disciplines and subjects with Engineering becoming the prized science, and, she notes that Bygrave, a Physicist, turned organizational theorist, noted that a significant number of management strategists were either Engineers or admired that profession. She is, however, optimistic that change will occur and believes that the search for, what she describes as the new shamans, has already begun in earnest.

Mr. MAGRITTE: I understand exactly what you are saying, but I find it difficult to comprehend why it has taken so long for this to be recognized. You see, I remember the First World War and the aftermath, fortunately I was too young to be called up for military duty at that time and did not do my military service until 1921, but many of my friends participated in the conflict some lost their lives and others suffered long term physical and emotional effects.

It was obvious to many of us at the time that the whole conflict had been the result of industrialization, colonization and politics developing an unstoppable machine-like life of its own. An insane situation where train timetables, out of date alliances, and detailed planning, took precedence over common-sense and humanity. At the end of the war there was a ground swell of opinion against the old organizations which manifested itself in the Arts, Literature, and Politics. Some people really did try to develop an alternative way of viewing the world, but unfortunately with limited effect. They learned, at their peril, in Germany and Russia, that there was not much difference between the old order and the new, when it came down to the organization of the state.

NARRATOR: *(replaces her spectacles, manipulates some keys on the lap-top computer and turns to the audience, and speaks.)*

Towards the end of the First World War, when the order was given to the German fleet to put to sea to fight one last battle, the sailors mutinied and took control of the city of Wilhelmshaven, forming a workers' and soldiers' council. It was not long before similar organizations, dominated by the Spartakists, sprang up in other major cities and took over the state governments in Bavaria and Wurttemberg. Attempts to establish a people's republic throughout the country were forestalled when moderate

social democrats proclaimed a republic. The social democrats were convinced that the revolution had to be suppressed so set about forming a freecorps, of, what was essentially, soldiers without uniform, to undertake that task. In March, nineteen-nineteen they went from town to town, dissolving the workers' and soldiers' councils, and arrested their ringleaders, most of whom, were executed without trial. The Russian sailors and workers who, in nineteen- twenty-one, attempted to establish their own government in the city of Kronstadt, suffered a similar fate at the hands of the Communist Red Army.

Mr. MAGRITTE: So you can see that even in the early part of the twentieth century, there were already signs that the old mechanistic way of viewing the world was being questioned by some, though clearly, not the majority. What is really interesting is, of course, that scientists too were already challenging the ordered view of the world. Max Planck had enunciated his revolutionary theory fourteen years before the outbreak of the war. Quantum Mechanics did not describe a clock-like universe and what was exciting was its weirdness even to the leading scientists of the day. Neils Bohr warned that anyone who was not shocked by it clearly hadn't understood it, and Erwin Schrödinger reacting to its puzzles, claimed that he actually didn't like it, and was sorry he had anything to do with it.

NARRATOR: *(starts typing on the computer, looks at the screen briefly, then speaks.)*

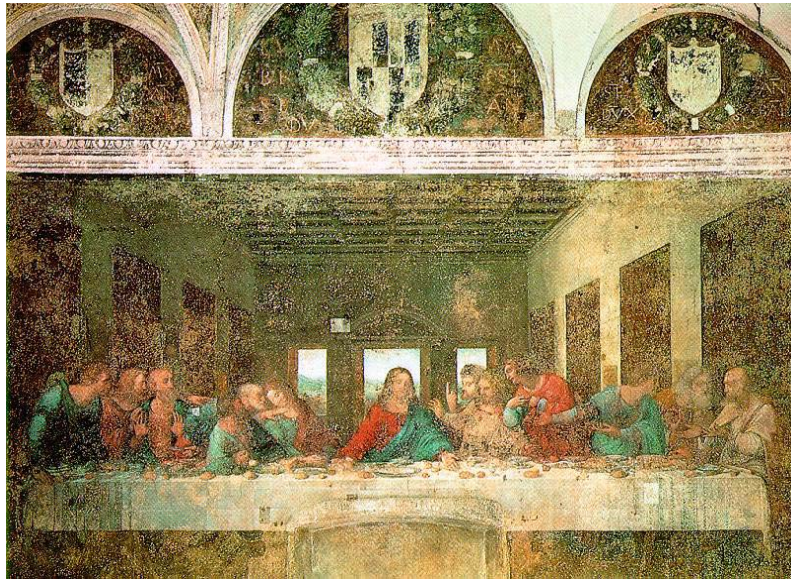
In 1900 at a meeting of the German Physical Society, Max Planck proposed the theory that that energy could only exist as quanta in multiples of an elementary quantity. He suggested that all forms of radiation traveled in discrete energy modules rather than continuous waves. Max was so concerned about the radical nature of his Quantum Theory and the implications of his discovery that he considered not publishing his findings. He had been educated in the Newtonian school of Physics with its belief in essential truths and natural laws and was concerned that he was about to undermine everything he believed in. Indeed he told his son that he had serious concerns about challenging some of the fundamental beliefs deeply held by his peers and that he had grave reservations about doing so.

Mr. MAGRITTE: So you see that it's interesting that the scientific challenge to the Newtonian way of describing the world was already well under way early in the twentieth century, yet it appears that the capitalists and management theorists, at that time, were looking increasingly towards the outdated theories, as a basis for their models of organizational efficiency, and even still do so, today.

Mr. THOMAS: Yes I agree, I've often thought that, perhaps, one way to address this would be to develop a new model of schooling, a contemporary version of a Renaissance type of education, but then re-visiting the past may not be the best option, so I am looking at other artistic metaphors as possible models. I'm beginning to think that there may be some value in looking at the curriculum debate through a Surrealist lens. This may, possibly, suggest some new ways of packaging educational programs that would preserve the integrity of the compartments, or subjects, yet still allow the rich and perhaps strange possibilities of a totally integrated curriculum. It might be a way of designing a curriculum that, through a combination or recombination of disciplines, might create an interesting and more challenging whole. This would be based on a world view neither Newtonian nor Quantum Physics, it would not be a theory of education according to Leonardo da Vinci or Jackson Pollock. It would not be The Last Supper or the Blue Poles curriculum, but perhaps, something that has elements of both, and yet something different. A curriculum model that, by its very nature, raises new questions but is still recognizable, or at least its components are.

NARRATOR: *(manipulates the computer and both images appear on the back-projection screen)*

Mr. MAGRITTE: I think I understand the idea and find it fascinating that you should look to my particular field of Art for inspiration, but I don't quite see how you could actually make it work in an educational institution. I would imagine that attempting to change the traditional arrangement of subjects, and the way in which the students are organized, would meet great resistance and be a severely divisive issue within a school. I think that you would meet great resistance to your idea.



Leonardo da Vinci. "*The Last Supper.*" 1495-97. Tempera on wall.
460 x 880 cms. Convent of Santa Maria delle Grazie. Milan.



Jackson Pollock. "*Blue Poles.*" (detail) 1952.
Oil, enamel and aluminum paint with glass on canvas. 213 X 489 cms.
National Gallery of Australia. Canberra.

Mr. THOMAS: I agree absolutely, but what I had in mind is probably not as radical as you might imagine. Say, for example, that I was to use my proposition to design a Science program that wasn't quite what you might expect it to be but also somehow richer than it might have been. I don't mean giving the students a completely open-ended task, where anything would be acceptable, or restricting their activities to the extent that authentic learning and personal discovery might not take place. For example, I thought about looking at wind chimes from a totally new perspective, a completely open approach, apart from the fact that the students would be discouraged from constructing devices that rotate or make a noise when the air moves. Therefore I would encourage them to seriously consider the unusual options, perhaps instruments for measuring the solar wind, Einstein's gravitational waves, perhaps a device to indicate the moment of catastrophe, in its Classical Greek sense, or a machine so sensitive that it can detect resonance, maybe a means of hearing Hildegard von Bingen's, breath of angels, or Kepler's, music of the spheres.

NARRATOR: *(Consults her computer and speaks to the audience.)*

There is an ancient Greek word that had already started to lose its original sense, even in classical times, it was the word used to describe the gradual return of a vibrating lyre string to its point of rest and equilibrium, after the instrument had ceased to sound, and that word was, "Katastrophe".

Hildegard von Bingen, who lived in the twelfth century, was known as the Sybil of the Rhine. She produced major works in Theology, Visionary Writing and Music. Her music was said to be so subtle that it produced the sounds of the breath of angels. It can be argued that her work has been the inspiration for contemporary new-age composers, whose music bears a resemblance to Hildegard's ethereal airs.

Johannes Kepler, a sixteenth century astronomer and natural philosopher, described the heavenly motions as nothing but a continuous song for several voices, perceived not by ear, but by the intellect, a figured music which sets landmarks in the immeasurable flow of time.

Mr. THOMAS: We would have conversations about our unusual ideas and produce detailed drawings of our proposals, I would discuss my own plans for an absence-of-

wind chime, an appliance for aeoliaphobes, that would produce a soothing rhythmic pulse when there was no wind, and fall silent when the air started moving above a predetermined speed.

It would be wonderful if the students actually constructed working machines, but I would see this as a bonus, rather than the objective of the exercise. For I have reservations about everything being hands-on, we have to create opportunities for high levels of minds-on activity. I would be confident that the depth of research required to fully participate in a conversation about surrealist wind chimes, would extend the students in ways that a factual study related to wind currents would never do. Please understand that I am not suggesting that we don't do that as well, indeed, the Science part of the program would be done thoroughly and scientifically. It's just that adding the quirky and more philosophical elements may lead to outcomes far richer than a Science or Technology or Humanities lesson would, in isolation.

(They have reached the brow of a hill, the road starts to decline sharply, and the driver applies both the footbrake and the handbrake to slow the vehicle; then changes down a gear. Despite double declutching and allowing the road speed to drop, there is still an audible clashing of mechanical components. The transmission noise returns.)

Mr. MAGRITTE: *(Raising his voice again.)*

Well I get the idea, but I don't quite see why you would need to set up a special series of lessons, that were considered unconventional, to achieve the sort of outcomes you were after, surely all education is about extending the students in a variety of ways and fully exploring all the possibilities, no matter how strange and unusual they might appear to be.

However, it seems that you are really implying that the school curriculum is now so overcrowded that teachers are nervous of innovation, or is it that the parents and students have certain expectations, so that's what they get? It must be really difficult to implement change or change expectations, for example, if one expects certain areas of knowledge to be dull and boring, then I assume that it would take a significant effort to change that belief.

You see, with my own work I have found that perceptions often have more currency than the facts or reality. In some respects, for a lot of people, the facts seem to be almost irrelevant in the formation of their beliefs. Take my own case, the public expects my work to be a bit weird, often it's not, but they don't see it. They expect surrealists to be unconventional and shocking in their private lives, yet most of us have pretty normal domestic relationships, though the public would prefer it otherwise, so we oblige then from time to time! I have found that public perceptions and expectations can be manipulated, but you have to work at it, gradually introducing the more challenging and bizarre, working away from their comfort zone a little bit at a time. You also have to, somehow, prove that you can do the normal things very well, in fact better than well, possibly better than anyone else before, then they don't object too much if you start doing things differently. Most of my peers have really got that element sorted out, everyone admits that some of Salvador's portraits and religious works are superior to anything produced by Michelangelo or Leonardo, Paul's early portraits and figure studies are as good as any old master, Luis' film making is technically excellent, as are Man's photographs. I have tried in my own work to aim for technical perfection, and, I believe I have achieved this, for no critic has ever dared accuse me of sloppy workmanship. They might have some trouble with the content, but they cannot find any grounds on which they might object to the execution of the work. You see, that is the secret!

Mr. THOMAS: So, Rene, what you are really suggesting is, that to implement change you must always start from where the public perceives that you are at, rather from where the facts, or reality, might indicate that you are. However, I know of schools where the community believes that certain areas of the curriculum, or particular teachers, are dull and boring when, in fact, they are not. Conversely the public often perceives that some schools or teachers are superior to others, despite any real evidence to support that view. However, the real old classics are, of course, a conviction that literacy standards have steadily declined from the good old days or, my day, the belief that a school is a good school if all the students are smartly dressed in appropriate uniforms, and the perception that government systems do not offer the same standard of education as the private sector. Yet, I think that you might have touched on something pretty important there. It's an issue that would be a great basis for a lively discussion with my colleagues, thanks for that.

Mr. MAGRITTE: You're welcome, I'm pleased to have been of some assistance, although I didn't expect to be participating in a conversation about education or even think that I had anything worthwhile to offer.

Mr. THOMAS: No, that's not the case, it's often been said by teachers, that if you really want to study education than the last place you should look is in a school, so I appreciate your comments. I would like to follow up, what you describe as, the public comfort-zone and how to manipulate it as a way of gaining acceptance for new and challenging ideas. I think, that in a school situation, it would probably mean ensuring that any new curriculum initiative demonstrated a clear and logical connection with the existing teaching program. I feel that, using your analogy of workmanship, it might mean that each component of the new curriculum has to be delivered in a way that is as technically expert as when it was part of a stand- alone subject. It would mean, for example, that the elements of an integrated program, based on Science and Humanities, have to be delivered as professionally as they ever have been, preferably better. The Science more scientific, the English more literary, the Art more artistic and so on, this, I think, would be the Educational version of your Artistic method for confounding the critics. It would be very difficult to object to a new curriculum that was as good as, if not better, than the one it was replacing, and, particularly if nobody really noticed the change taking place. It's seems that it is the suddenness of change that is the real issue, so a gradual, almost stealthy approach, may be the way to achieve one's goals. It reminds me a little of the story about boiling frogs. Evidently if a frog is thrown into boiling water it makes a horrendous squealing noise as the poor creature is scalded to death yet if a frog is put in cold water and the temperature is gradually brought to boiling point it doesn't notice anything and quietly expires. Perhaps this would be the most useful metaphor to keep in one's mind when implementing educational change.

(The road is flattening out, there are more houses visible, but the surroundings are still predominately, rural. The driver selects top gear and the noise level drops.)

Mr. MAGRITTE: I've never heard it put quite like that before and you could well be right, I'm not that familiar with the field of education but it does seem to have

some possibilities, however, you have to realize that perceptions have to be manipulated very subtly, almost massaged. As you hinted the most effective way, of course, is to convince everyone that you are doing nothing unusual or different. The majority of us did that with our early work, no random daubs of garish paint, no overly controversial subject matter, just a demonstration of technical mastery. Then, when they're comfortable with that, you give them the burning giraffes or steam locomotive coming out of the lounge room fire place and they're quite receptive. In fact they think it's pretty good and they could quite comfortably live with it on their dining room wall. Perhaps implementing change in an educational context should be done in the same way?

NARRATOR: (the narrator presses a key on her computer and the images appear on the screen.)



Salvador Dalí. *"Giraffe on Fire"*. 1937. Oil on canvas. 35 x 27 cms.

Öffentliche Kunstsammlung



Rene Magritte. *"Time Transfixed."* 1939. Oil on Canvas 146 x 97 cms.
Art Institute of Chicago collection.

Mr. THOMAS: Rene, as an accomplished Artist you might be interested to know that it was actually the writing of an Art educator that was the principal source of inspiration for the review of an integrated Science and Humanities program. You see, years ago, I completed a study which was concerned with the development of creativity in children, and particularly, whether it could actually be taught, and, if so, how would you measure any progress? Anyway, my reading around the issue led me to discover the work of Elliot Eisner, and specifically, his book, *Educating Artistic Vision*, (5) which, I think you might enjoy, however, I recalled that, although his writing was specifically about Art education, his observations and conclusions seemed to be applicable to any educational context.

Mr. MAGRITTE: Well, that must have been a fascinating area of study and, I would assume, quite a contentious one. For whilst I can see that as an educator with an interest in Art, rather than a practicing Artist, you might want to determine whether creativity can be nurtured and even developed, to be perfectly candid, I can't see any compelling reason for measuring it. For me the experience of creating something from nothing is more exciting than the actual result so I tend to support Oskar Kokoshka's point of view that, all people are born with genius and that all children are inspired artists. (6) For him the only real question is one of why many of them lose this gift so quickly, or why it is withdrawn from them. I think the answer has to do with how we relate to children in our homes and the way we educate them, and feel that therein lays the responsibility, to a great extent, for this for this phenomenon.

Mr. THOMAS: Well, my own study came to much the same conclusion about measuring creativity, although I did find that there appeared to be ways to nurture and encourage it. And, although I haven't heard it described in that way, as a parent and an experienced teacher I am afraid I have to admit that there may be an element of truth in what he says. Indeed, trying to understand why this might be so, coupled with a desire to attempt to improve the situation, particularly in the field of high school education, is probably what motivates my research.

(5) Eisner (1972) (6) Orban (1975, p.20)

I hadn't really thought about it in those terms before, but I think that resolving the phenomenon you described, has always been a determining factor in the way I approach my professional responsibilities as a teacher, even though I haven't necessarily recognized it, or been able to articulate it clearly.

However, as I indicated, I was interested to find out in some detail how successful the integrated Science and Humanities program had been. What I did discover fairly quickly was that the actual collection of data was relatively straightforward, but the interpretation of that data and understanding the significance of the students' written comments was another matter. Indeed could I even be sure any of it was true? I don't mean that they were lying as such, because people generally are truthful, but their stories may not be, so I was uncertain whether I could rely on the recollections of the students, or even on my own.

Mr. MAGRITTE: Ah! Yes the memory is a fascinating thing and a great source of inspiration for Artists. I think that memory is the most paradoxical of all the senses. It is so powerful that even the most fleeting impressions can be stored, forgotten completely, and then reproduced in perfect detail years later and yet so unreliable that it can also play us completely false. Nobody seems to know how these false memories are laid down, but some researchers think that they are recorded in the brain at the same time as the event, while others believe that we develop a schema about what happened and then retrospectively fit other events that are untrue, although consistent with our schema, into our memory of original experience.

But, of course, Mark Twain explained it much more simply by saying, "The further back I go, the better I remember things, whether they happened or not!" (7)

(7) Burns (2002) Quotation from *Mark Twain*. A.B.C. Australia. D.V.D.

Mr. THOMAS: Yes, absolutely, and you are quite right, popular authors can often say precisely, in a few words, what it takes an expert a whole thesis to explain. There are some wonderful lines in one of Terry Pratchett's, Discworld, novels, where Susan, who is a teacher and also happens to be Death's adopted daughter, is talking to her headmistress and says something like,

"What precisely is it that you wanted madam? It's just that I've left the class doing algebra, and they get restless when they've finished."

And the headmistress comments, "But, that's too difficult for seven-year olds!"

To which, Susan replies, "Yes, but I didn't tell them that, and, so far, they haven't found out." (8)

And, when you think about it, that's basically all there is to successful teaching, and summed up in a few words.

However, as I was saying, it was when I was faced with the task of doing something useful with the results from my research that I had problems. I'm beginning to see that interpreting research and, I suppose, writing a thesis, is a bit like sculpture. In particular, sculpture from a solid block of material. The questionnaires, observations, professional reading, conversations, journal notes and so on quickly develop into a huge block of raw material, but that's the easy bit, the real difficulty is knowing what to do with the block once you have got it.

I believe that there was once a celebrated sculptor, and I can't quite recall which one at the moment, although I'm sure you know who I'm talking about, who, when asked how he created such a magnificent horse replied, that he just cut away all the bits that were not horse-like. Perhaps that is the sort of skill that educational researchers need to acquire.

(8) Pratchett (2002. p. 121)

However, for the researcher in the area of education there are additional difficulties like, determining just what sort of horse you are looking for, whether studying the horse will change the nature of the horse, The Hawthorne Effect, whether you can be certain about what's happening to other parts of the horse when you are focused on one particular section, Heisenberg's uncertainty principal, or indeed, whether the thing that you are studying is a horse at all!

NARRATOR: *(Consults her computer, looks puzzled, makes a brief telephone call, and turns to the audience.)*

The Hawthorne Effect, improvement in a production process caused by the obtrusive observation of that process. The effect was first noticed by Professor Elton Mayo, from the Harvard Business School, whilst examining productivity and working conditions at the Western Electric Hawthorne Works in Chicago, during nineteen-twenty-four. It is now generally accepted that any obtrusive investigation of an environment will have an effect upon that environment.

Werner Karl Heisenberg's Uncertainty principle of nineteen-twenty-seven; holds that the position and momentum of a sub-atomic particle cannot be precisely determined at the same time, or that events on the sub-atomic level cannot be predicted exactly, only the statistical probability of such events can be determined.

Mr. MAGRITTE: I think the sculptor was the Italian Baroque craftsman, Bernini, but don't quote me on that. Incidentally, it occurs to me that the problems associated with precisely determining what is happening in a classroom, and the study of the sub-atomic world have a lot in common, for they both appear to be very difficult for much the same sorts of reasons.

Mr. THOMAS: Yes, when you're focusing on one part of the room, you can never be sure what's happening in the other, so I was somewhat reassured by Eisner's view that there are limitations to scientific research in the field of education and that is why, he feels, most of it is descriptive rather than experimental. He thinks that experimental educational research is not that common, in part, because it is a far more complex venture. But, typically, that was what attracted me to attempt to do it. I wanted to do more than merely describe what had occurred, however, as well as the

problem of being new to this type of research there was the additional complication that the research was being undertaken three months after the teaching program had been completed.

(The road is starting to enter the outer suburbs of a city, there are houses set in large gardens amongst tall trees.)

Mr. MAGRITTE: I can understand the difficulty, for the Artist too, timing can be a significant issue because the physical process of making the Art, obviously, takes time, yet the inspiration may be spontaneous. Various Artists have resolved this difficulty in different ways, some have attempted to capture an actual moment, in the style of the Impressionists, there are those who have tried to illuminate some sort of universal, but timeless, truth, and others whose work describes an event or are observations on the human condition that, clearly, have a fixed temporal dimension. I have experimented with this phenomenon and actually make use of the enigmatic nature of time, as a theme, in my own work. For example, in the painting which I called, Time Transfixed, I have a clock stuck at about seventeen minutes to one. I believe that the puzzle, created by the train coming out of the fire-place, is enhanced by this image and helps engage the viewer in a dialogue about the whole meaning of the piece, you just cannot ignore it. So, what I think I am suggesting is, if you see your educational research as a creative exercise, you need not overly concern yourself with the temporal nature of what you are doing. In fact, you could possibly use a whole range of Artist's tools, making some of your research study a fleeting snapshot to catch the atmosphere of an event, in the style of Turner, other elements might attempt to illuminate some type of universal truth about the field of education in general, or you might even describe and comment on a situation that is clearly bound within a specific temporal context. If you think about it, you would probably be able to use a range of tools in the same piece of educational research work, as indeed you could in a major piece of artwork. There is, of course, another way that artists resolve the difficulties associated with the temporality, and that is to treat all work as ephemeral in nature. You see, the experience of creating something can be as valuable as the actual physical product.

There are some art schools, which I respect very much, where students may work on a single project for weeks, or even months. When the student feels that they have explored all the possibilities, and resolved all the problems, the work is discussed with the tutor and fellow students and then destroyed. The rationale is that the student can be free to experiment in ways that may have been avoided if there were some permanent record of their efforts.

Mr. THOMAS: I hope that you're not suggesting, in that case, that when I have completed my thesis I should submit it for examination and then ask the university to ritually shred it, whilst I, perhaps, set fire to my own copy. However, you might have something there, for by the time it's finished it will be too late to have any real impact on the particular curriculum initiative that I am studying, or offer any specific practical assistance to the teachers or students who were involved in the initial research. But I would really like to think that it may help illuminate some of the problems that might be encountered when others introduce new programs into schools, particularly the more conservative type of school, and possibly suggest some helpful ways to address those difficulties.

Mr. MAGRITTE: Yes, you would obviously want to do that, but had you actually considered that merely involving the students in your research and valuing their contribution, may have had a positive impact on their learning, much in the way the artist gains from the process that I described. There may not be a product but there is productivity.

Mr. THOMAS: When you explain it like that, it puts a whole new perspective on classroom research. I had not really considered educational research to be a learning tool in its own right, but I think that you might be correct in your observation. It would certainly be an interesting question to follow up with some type of research to determine if classes that are regularly studied have better learning outcomes, than those who are not, but then you could never be sure if the study was the object or the subject, much like Alfred Korzybski's map of a map etc. that you mentioned before.

However, with this particular piece of research the really fundamental questions were, as I said, to do with the usefulness of the research, or even why I should do it

all. But, if I were to be really honest, there was another agenda. I was anxious to dispel the myth that, somehow, an integrated program automatically results in the elements of the traditional curriculum being reduced to the lowest common denominator. This is a criticism often leveled at supporters of middle schooling.

I am beginning to understand that to successfully implement change you have to demonstrate that you can actually do the more traditional things as well as, if not better than, the critics themselves. As I mentioned earlier, the Science elements have to be more scientific, the English more literary, the Maths more mathematical, the Art more creative etc. so, I suppose, I wanted to demonstrate that this might be possible.

(The car is traveling through a more densely populated area; the volume of road traffic has increased. The driver has to make frequent stops at traffic lights.)

Mr. MAGRITTE: It's interesting that you should use the term, 'critics', it's almost as though you considered them to be your audience and this is, perhaps, a dangerous game. It has been my experience that the opinion of the critic is, more often than not, not the perception of the public at large. So, in an educational sense, the students and their parents are your 'public', and they are the ones who need to value your work, it really doesn't matter what the critics may think. And you might also like to consider the great publicity value to be had from the negative reactions of the critical community, it does wonders for your case, everyone wants to know what all the fuss is about.

Mr. THOMAS: You are absolutely right of course, but teachers generally do worry about critical peer review, although, to be candid, the students and their parents were so enthusiastic about the program, that, in the final analysis, it probably didn't matter what anyone else thought.

We did not do anything radical, but actually achieved a lot by using a traditional Science unit related to Earth and the Solar System and an English unit that was based on writing for particular purposes. The actual products of the program were games based on the exploration of the solar system, with the restriction that they had to accurately depict the true scale and relative positions of the planets in the system,

and, use existing or emerging technologies. There were to be no aliens, time travel or teleportation devices, however there were no restrictions placed on the materials that could be used or on the organizational structure of the working groups.

Whilst my colleague was engaged in the introductory Science based elements, I was working on a Humanities program that covered a range of scientific writing, from factual science to believable speculative science writing and outright science-fiction.

I found three excellent movies to use as support material, “Apollo Thirteen,” “Contact,” and “Mars Attacks.”, and, interestingly, the students responded the most enthusiastically to “Contact” which surprised me. It is a relatively long movie, with little action, and a strong emphasis on the complexities of personal relationships and the search for truth through science and religion. It debates the notion that belief may be possible without evidence and that all science has an ethical component. I would have bet that adolescent students would have voted for “Mars Attacks”, as their favorite, but they didn’t, I would have lost my money. However, that would have been a price well worth paying.

Mr. MAGRITTE: Forgive me if I am being a little difficult here, but did the students fully engage in the work and, more importantly, were they able to convert their energy and enthusiasm into an experience that was personally valuable? I suppose what I’m really asking is, did they get anything more than enjoyment, out of it?

(They are now traveling through the central business district, along a street of contemporary glass and concrete office blocks interspersed with colonial and federation-style buildings.)

Mr. THOMAS: Fair enough question, I am certain that this particular program added a depth to the students’ work in Science that would not normally have occurred in a more traditional curriculum and it also gave their writing an authority that is rarely present in a grade eight English class. I thought that the program was highly successful, the students certainly knew the Science of the solar system in great detail, down to the chemical composition of the atmosphere of the planets, their

writing and capacity to critically analyze text was of standard often associated with more senior students, and, the games were stunning with some of them being virtually commercially viable.

They ranged from, fairly conventional, board games, where the problem of scale had been solved by having zones related to the real time of travel using current technology, or bands representing different distances, to a three dimensional game constructed within a mesh cube. There was a highly sophisticated ‘Monopoly’ style game based on commercializing the ice from Ganymede, a game for primary school students to played on a sports oval with a two-meter diameter sun and appropriately sized planets, and, a computer game developed by a group of students who felt that using this technology the most effective way of depicting the time and distances involved.

Mr. MAGRITTE: Well, you seem to have answered my question, although I notice that you have relied on your own perceptions to come to this conclusion, when, in fact, you were actually describing an educational research project. It’s not that I do not believe you, on the contrary, what you have described, and the way you have described it, leads me to believe that it is a truthful analysis of the particular program. But, if that’s the case, and you trust your own intuition, why do educational research at all?

(The driver changes down a gear, this time smoothly and silently as the oil in the gearbox has finally warmed up, the vehicle turns towards a wharf-side area.)

Mr. THOMAS: Now that is a very good question, because, as a teacher, there are, probably, only three basic questions to really ask about any classroom environment. Quite simply, would I want to be a student in this classroom, would I want my own child to be in this classroom, and, ultimately, would I really want to be a teacher in this classroom?

Mr. MAGRITTE: That sounds good to me; maybe, if you were really serious, you would have that written over every classroom door or make it the school motto or something.

Mr. THOMAS: Yes, brilliant idea, but to return to your question, I suppose that, perhaps, the conclusions that may be drawn from any form of educational research are going to be as useful in a specific classroom as the science of meteorology is in predicting the weather on any particular day.

For the scientists with all the data from their geosynchronous satellite images, information from buoys in the southern ocean, ground stations, balloons and so on, can never be totally sure of their predictions. However, it would be fair to say, for example, that, in this part of the world, summer temperatures are generally warmer than those in winter. But, on any given summer's day, that could be totally incorrect, even where we are at present, there could be a hail-storm. However, that does not necessarily imply that the science of meteorology has no intrinsic value or is not useful for the general community.

Mr. MAGRITTE: Well, in that case, I suppose that we have been lucky, because one could not hope for a more pleasant day on which to enjoy such a journey, and, at my age, I'm not sure how I would cope with driving through a tempest in an open car.

(With a squeak from the brakes, the car comes to a halt, alongside a two-story restaurant, which overlooks the harbor. There are fishing boats on either side. The driver applies the handbrake and switches off the ignition.)

Mr. THOMAS: Now, that is an interesting point, because there actually seems to be a speed at which rain, or snow, tends to be deflected over, and around, the windscreen, to the extent that you do not get wet. It's not such a high speed either, about twenty miles an hour or so, but the only problem is that you have to keep moving. Once you stop you've had it!

So if we use the analogy of Meteorology, perhaps Educational Research might exhibit similar characteristics, for the data, no matter how comprehensive, or scientific, may actually, at best only provide, the equivalent of seasonal observations about what is happening in an educational setting. A well-crafted piece of research

may allow one, in general terms, to state that a particular program, type of classroom environment, or methodology, positively enhances student learning. However, like the local weather, the experience of observing a specific classroom, on any particular day, may lead one to a totally different conclusion, but neither should that suggest that research in this field has no intrinsic value, or nothing useful to offer the educational community at large.

Mr. MAGRITTE: Yes I can see that, and it probably applies to all areas of research if you think about it.

Well, we appear to be here and have arrived in good time, our table has been booked, and, I can see the gentlemen from the Museum and Art Gallery sitting over there at that outside table with the black umbrella. Thank you so much for such a delightful journey and interesting conversation, if the food is only half as good, I will have had a perfect day, and, I am told that the food is excellent.

CURTAIN. Being the end of Act one, scene one.

Chapter Two.

Determining the Questions: Choosing the Methodologies.

There is a story about King Croesus that goes something like this; he had learned that the Persian king was becoming more powerful by the day, this worried him and he wondered whether he should attack the Persians before they became too powerful, so he decided to consult an oracle. He had already determined that the oracle at Delphi was the best in the kingdom and had bestowed many gifts upon it to gain favor for the crucial advice he needed.

Croesus asked the oracle whether he should declare war on the Persians, the response was clear enough.

“If you make war, you will destroy a mighty empire.”

Ford (2001, p.69)

Croesus was overjoyed when he heard this, and marched his army into Persia, where his troops suffered a catastrophic defeat. He should have taken more care when formulating the question and receiving the answer.

When I first enrolled in the Doctoral program at Curtin University of Technology, I was in the first year of an appointment, after voluntary transfer, to a new high school, working in the Technology Department, as well as having a teaching allocation in the Visual Arts and Humanities areas of the curriculum, along with other general management responsibilities. I was convinced that I already knew what the topic of my thesis would be, certain about the sorts of questions I would ask, the quantitative research methodology I would use, and had predicted what responses to expect and what my conclusions would be. I was planning to compare the academic success of those students who were high achievers in Science and Mathematics with their achievements in the Arts. I knew what I wanted to find, namely that those students

were often successful in both areas of the curriculum, despite the folklore within high schools that suggested that they were mutually exclusive, with ‘Arty’ types of students and ‘Sciency’ types of students. However, I had observed that frequently an individual who had won a Science or Mathematics prize was likely to have won an award in an Arts subject as well. Therefore, through my research project, I was going to prove once and for all that the boundaries between the subjects were largely artificial constructions designed for administrative convenience, and, dispel the myth that a student who was having difficulty in Science or Mathematics might “benefit from some extra Art.”

My initial research efforts, however, were as about as successful as King Croesus’ invasion of Persia. Like him I knew the answer that I wanted to hear, but did not seem able to develop an effective question or a methodology to actually get that answer. For it became abundantly clear that it was not an actual question but a series of questions that were really concerned with some fundamental beliefs, and opinions that had, in some respects, led to our current thinking about how schools should be organized. It became evident that it was an issue that could not be determined by administering a few questionnaires to a few students, or indeed, thousands of questionnaires. I needed to be more specific. However, before I was able to formulate any concrete proposals for a thesis, my particular circumstances, as is so often the case in educational settings, changed, and presented me with a new range of possibilities. The school was about to implement a middle schooling program.

In Australia, “middle schooling”, as a descriptive term, has become rather vague and subject to state and local interpretation, however, Chadbourne (2002) in his report on middle schooling, commissioned by the Australian Education Union, suggests that there are useful distinctions that can be made between middle years, middle school and middle schooling. Briefly, he states that the term “middle years” applies to early adolescence, to students between the ages of ten and fifteen years, who may be found in upper-primary school classes, lower secondary-school classes, purpose-built middle-schools, and in schools that cater for a wider range of students, such as District High Schools with their Kindergarten to Grade Ten student intake.

Chadbourne suggests that the term “middle school” refers specifically to an organizational structure that is separate from a primary or secondary school, which provides an education to students in their middle years. They can vary from one grade to multiples of grades, with some schools accommodating grades five to eight, whilst others cater for grades six and seven and others covering grades seven and eight. However, he believes that the educational programs offered may or may not be based on the principles of ‘middle schooling’, as the establishment of a separate institution may not necessarily ensure that the pedagogy and curriculum will be consistent with best “middle schooling” practice. He suggests that term “middle schooling” refers to a philosophy and practice of education that is responsive and appropriate to the needs of young adolescents.

The Australian Curriculum Studies Association (1996) report entitled “From Alienation to Engagement” came to the conclusion that there was no simple formula for an appropriate middle school experience; but that systems, school communities and individuals had clear responsibilities in this area and highlighted the need for a national strategy to improve the educational opportunities available to the young.

(p.1)

During 1996 and 1997 the National Middle Schooling Project was concerned with developing a common framework that would underpin educational programs that were designed to meet the needs of these students. The resulting set of key principles and practices can be summarized as follows.

Young Australian adolescents have a need for: identity, relationships, purpose, empowerment, success, rigor and safety. Middle Schooling practices should be: learner-centered, collaboratively organized, outcome-based, flexibly constructed, ethically aware, community based, adequately resourced, and strategically linked.

Barratt (1998, p.1)

The Australian Secondary Principals Association (1994) guidelines for middle schooling suggest that

Most young adolescents will respond well to structured group learning activities which provide for their continuing need for social learning and interaction.

(p.1)

And, the National Middle School Association (2001) concluded that developmentally responsive middle level schools are characterized by

A flexible organizational structure, a shared vision; and the provision of a curriculum that is challenging, integrative, and exploratory.

(pp. 2-3)

Therefore, a middle schooling curriculum needs to be challenging, having a broad and general range of intellectual outcomes designed to facilitate the participation of young adolescents in a changing world. It needs to be a responsive and distinctive phase of education, with intrinsic value, that addresses the needs of the students by providing a variety of learning opportunities and strategies designed to allow them to reach their full potential. Ideally, it will be empowering, motivating and supportive of their efforts to become responsible for their own learning and development. Above all, the learning should be purposeful, self-directed and cooperative, whilst the teaching should be rigorous, holistic and adaptive.

In my new school I was invited to take on the role of a Grade Coordinator with responsibility for the first year intake of students as I had already had some experience of this type of organization in an appointment at another school. This position entailed working closely with the team of teachers operating in the middle school, years seven and eight, and also a responsibility for encouraging new curriculum initiatives, as well as the usual Grade Coordinator's student management and pastoral care roles. The school, which was managed along very traditional secondary school lines, was anxious to develop a more appropriate learning program and social environment for the students in the junior years.

The existing organizational structure was a formal arrangement based on age related grades, generally in the range of twelve to fifteen years, grades seven to ten, which, for administrative purposes, were divided into heterogeneous class-teacher groups of

twenty-five to thirty students. The teaching groups in the junior grades, grades seven and eight, were based around the class-teacher groups with minor variations to accommodate the study of languages other than English. The teaching arrangements in the senior school, grades nine and ten, were determined by the subject departments, some of them retaining the class-teacher groupings and others allocating the students to classes on the basis of perceived academic ability or organizing them according to their choice of optional subjects. The curriculum, therefore, was delivered by the subject-oriented departments, each of them separately managed and resourced and with their own discrete program for each grade. This meant that students frequently had to cope with up to fourteen different teacher contacts and as many learning environments in their first few weeks of secondary schooling.

Some curriculum rationalization had taken place within the Science and Mathematics subject departments and within the English and Social Science areas where strategies had been developed to ensure that particular units of work were not delivered two or three times to the same class or repeated the following year, whilst others were not covered at all. The mapping of the curriculum for each subject department and the allocation of one teacher to a pair of subjects, usually Mathematics and Science or English and Social Science, were strategies used to improve that situation, rather than being a serious attempt to develop a more integrated curriculum. However, participation in this process did mean that teachers were already involved in an ongoing dialogue about curriculum reform, which created a positive environment and a valuable entry point for further discussion.

The new arrangements retained the existing subject-based administrative structure but the middle school team was given responsibility for creating a more personal and stable environment for the incoming grade seven students. A key element of this was to first develop effective links within the Science and Mathematics and the English and Social Science programs and to design new curricula that might facilitate connections between the subjects, particularly between the Sciences and the Humanities. The eight members of the team would be responsible for over sixty percent of the instruction time allocated to the grade seven classes, in some cases more if the team member elected to take on one of the non-core subjects as well.

Basically, a ‘pair’ of teachers, one Mathematics-Science specialist and one English-Social Science specialist shared a pair of classes, with each having the pastoral care responsibility for their own specific class. To assist with the implementation of this initiative a program of professional staff development was organized for the team by the State Supervisor of Science Education.

My new appointment to the position of grade seven coordinator appeared to offer the ideal opportunity to engage in a research project that could monitor a program from its inception and would perhaps identify some of the difficulties that might be encountered and illuminate some strategies that might be useful in dealing with the organizational, philosophical, and resource allocation problems that inevitably arise when schools attempt to implement significant changes. It has been my experience that meaningful cultural change within an educational environment is often very difficult to achieve successfully but I hoped that a detailed study of a particular initiative within my own specific school might help identify some issues that may also be relevant in a more general educational context. My thesis therefore was going to consist of a review of the implementation of a middle school program within a traditional high school setting. As well as focusing on the constraints identified by teachers, both actual and imagined, I hoped to identify the types of learning environments that would be conducive to the successful implementation of this type of initiative.

One cannot enter the field of contemporary educational research without becoming aware of the continuing debate between proponents of qualitative and quantitative research. A fascination with this issue distracted me from the real point, which was, what did I want to actually find out, and why? Therefore, it is probably worth trying to make some broad distinctions at this stage. Myers (1999) states that

Research methods can be classified in various ways, however, one of the most common distinctions is between qualitative and quantitative research methods. Quantitative research methods were originally developed in the natural sciences to study natural phenomena. Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena.

(p.2)

Creswell (2003) sees these as two ways of knowing

Constructivism, based on understanding, multiple participant meanings, social and historical construction and theory generation.

and

Postpositivism, based on determination, reductionism, empirical observation and measurement and theory verification. (p.6)

These are reflected within methodology, for example

A qualitative approach is one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (i.e. the multiple meanings of individual experiences, meanings socially and historically constructed, with an intent of developing a theory or pattern) or advocacy/participatory perspectives (i.e. political, issue-oriented collaborative or change oriented) or both. (p.18)

A quantitative approach is one which the investigator primarily uses post-positivist claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories). (p.19)

Within those frameworks there are a number of possibilities: Empirical statistical models; (Fraser, Anderson & Walberg (1982), Fraser, Williamson, Treagust, & Tobin (1986). Moos & Trickett (1986); Action Research, (Dick (1999), Kemmis & Mc Taggart (1982); Reflective practice, (Dinkelman (2000), Hankins (1998), Powell & Chandler (1997), Daniels (2002) and Self-research (Marsh, Craven, & McInerney (2003) Additionally, within those broad definitions, there is another sub-set of research instruments ranging from highly reductionist formal questionnaires to autobiography; some are in common usage and others are yet to be invented.

The choice of research methodology is no longer a contentious issue. However, the use of self-study autobiographical accounts, to gather research data and then presenting that data in an unconventional way, may be viewed with suspicion in some quarters. Taylor and Settlemaier (2003) note

The postpositivist tradition of reporting science education research uses a scientific, objectivist 'scholarly' writing style. This tradition has been long established in science education research and has made it difficult for alternative scholarly writing styles to be accepted in the science education community. (Stapleton and Taylor, 2003). Thus, resistance is to be expected from science

educators whose natural attitude favors the modernist objective of striving for certain knowledge that transcends a fallible, human perspective. (3)

This is odd, in the circumstances, when you consider that in most groundbreaking scientific discoveries, the lived experience of the researcher is as interesting and central to the discovery, as the subject of that research. Fensham (2001) when describing the role of Story within the school science curriculum notes a similar contradiction

For some strange reason we, as science educators, until very recently have forgotten that Story could be a powerful form of education in our own subject of Science.

I use the word “forgotten” deliberately because I myself have been reminded, through a current research project, of the powerful influence The Harvard Case Histories in Experimental Science had in the 1950’s on a number of the pioneers of science education research who I have been interviewing. Ironically, these Case Histories were produced not for use with science students but for use in undergraduate classes at Harvard University for law and humanities students. (p1)

I found myself entangled in that contradiction and thus determined that the best option would be a quantitative study, but the least reductionist one that I could find. I therefore decided that the work should be based on a classroom environment instrument that I had previously used in a Professional Institute with the National Key Centre for School Science and Mathematics.

However, I then discovered authors like Denzin & Lincoln (1998), Guba (1996), Rhodes (1996) and Polkinghorne (1997), and convinced myself that a qualitative study would be a legitimate alternative, and feeling an empathy with Amster (1999) who believed that

Sociological inquiry is never undertaken in a vacuum, but is instead contextual, subjective, and, despite claims to neutrality, always biased. Indeed it might be said that a researcher without a bias is either dishonest disinterested, or dead. (p.1)

I therefore imagined myself as a bricoleur, wandering around the classroom collecting information from a variety of sources, my thesis thus becoming a deep and complex picture of what had actually occurred.

A bricoleur works with the materials at hand in constructing models analogies and arguments, becoming a “Jack of all trades” or a kind of professional do-it-yourself person. ----The researcher-as-bricoleur-theorist works between and within competing and overlapping perspectives and paradigms. The product of the bricoleur’s labor is a bricolage, a complex, dense, reflexive, collage like creation that represents the researcher’s images, understandings, and interpretations of the world or phenomenon under analysis.

Denzin & Lincoln (1994, pp.2-3)

I saw myself interpreting classrooms through the use of a journal in which I noted and reflected upon my observations, in the style of Hankins (1998, p.1), and by using taped interviews with teachers and students, collecting samples of work and video recordings of that work in progress.

I recalled once watching a television documentary about the film director, Huston. He was commenting on his film reports from the Aleutian Islands, during the Second World War, which had so upset the United States government, because he had left the camera running and made no attempt to edit his work. The images of inexperienced pilots crashing on to ice-covered runways, often with fatal consequences, were quite unlike any other newsreel coverage of the war effort. He explained that he

Wanted the story to tell itself as I didn’t have a story in my head to start with.

(Report from the Aleutians A.B.C. Television 1.11.2000)

Therefore, like Huston, I would tell it as I saw it and, provided I did so to the best of my ability, it would have to be acceptable. But then I recalled Fisher's (2000) cautionary tale about the observation of a Taiwanese classroom,

An extract from a report on a Taiwanese classroom by an Australian researcher

The teacher talks continuously, pausing only to write on the board, or draw a diagram, or wait for a question that is never asked. He looks at his watch, continues to talk about what is written on the board, and consults the exercise book as he has all through the class. He examines his watch once more and decrees that everyone should pack up. There is a general chorus of approval and one boy is so excited that he claps.

Shortly after the text books are out of sight, there is a hum of agreement and a burst of laughter from one of the children. At first I think that this signals the end of a very tedious session in which students have sat and listened to endless talks by the teacher.

An extract from a report on the same classroom by a Taiwanese researcher

It is 5.10 pm. and a student near the front has already put her head on the table. There has been seven hours of learning already today and this is the eighth hour.

The teacher has spoken a lot ranging from non-vascular plants to vascular plants, from mosses to ferns and seed plants. The teacher has lectured for forty minutes and the students feel that they cannot put much more learning into their minds. The teacher thinks that, maybe, he has talked too much already and decides to stimulate the students by giving them a chance to practice. There is insufficient time for a test, why not just ask the students? So the teacher asked, "Do you have any questions?"

Fisher (2000, pp. 1-2.)

There clearly would not be such a cultural gap in my study but what if my observations were wrong, despite knowing the staff and students well, what if there were an interpretation gap between us, a problem of re-presentation? Choosing an appropriate methodology, therefore, became a critical element of my research project and I determined that the best option might be to utilize a combination of both qualitative and quantitative research, as outlined by Fraser and Tobin (1991). Using multiple methodologies appeared to be the appropriate course for an investigation into what was a complex process within the school and whilst this approach to

research clearly held challenges it also appeared to offer interesting possibilities. Ultimately, the choice of methodology had to be a personal one. Combs (1995) concludes that

Understanding one's self-referencing or paradigmatic grounding requires that there is a fit between chosen research sensibilities with their explicit paradigmatic groundings.

(p.1)

I planned to use interviews, written observations, feedback from our professional development sessions and student questionnaires to develop a research base that would allow me to describe and interpret the changes as they occurred and then reflect on those observations. My thesis would concern itself with all the various aspects of the implementation of the middle school program at the school.

I hoped to develop the study around the two major issues that personally concern me as an educator; of how to effectively implement and maintain educational change and how to address the difficulties that result from the compartmentalization of knowledge within the high school curriculum. I was interested in the dynamics of change and wanted to identify some of the factors that may determine whether any given initiative succeeds or fails. The objective of the review of this particular program, in a specific school, would be to identify general practical solutions that might help overcome some of the difficulties encountered when significant changes are attempted in the educational sector. I hoped that my conclusions might provide some useful insights that could assist other teachers who were experiencing similar problems in similar situations.

I was also intrigued with the way schools tend to compartmentalize knowledge in a broad sense, such as Artistic, Literary, Scientific, and so on, and the internal compartmentalization that occurs like, Biology, Physics, and Chemistry. I wanted to know why that was so and how one might design a curriculum that may encourage students to develop a coherent view of their own education, particularly in the adolescent years of secondary schooling.

I believed that my study may have some significance, first in that I might identify practical guidelines for the implementation of curriculum change in educational settings and, secondly, explore the possibility that there may be an alternative framework in which one might locate debate about the school curriculum. In my experience, educational initiatives are usually presented in only one of two ways, either as a variation of the status-quo or as radical and progressive. This frequently has the effect of polarizing opinions before any rational debate can occur. Indeed, an initial interpretation may determine whether the initiative is supported and succeeds, or whether it is not, and fails, with that response perhaps determined, simply, on the basis of who is presenting the proposal and which agency is promoting the change.

My research questions would be concerned with issues such as: what was the nature of the practical and intellectual constraints expressed by the team members? What were the possibilities for improvement perceived by the staff involved? What were the preferred teaching styles of the staff and the type of classroom environments preferred by the students and, ultimately, was the program successful?

The qualitative elements of the research would include the transcripts of the audio-taped interviews that were conducted with staff and students at regular intervals, written observations from teachers and students and reflections on my own journal notes and professional reading.

I was aware of the difficulties inherent in action research of this type but wanted my study to become more than a mere description of events. As Eisner (1972) points out, there are limitations to scientific research in the field of education which tends to make studies descriptive rather than experimental. He notes that this is curious because, as he sees it

The type of knowledge most useful for guiding educational practice is not simply a description of a state of affairs but an identification of causal relationships. Experimental studies in education are not as common as descriptive studies, in part because they are more complex ventures.

(p.246)

I was confident that the use of range of methodologies, rather than a singular methodology, would be an effective strategy to keep the study flexible in nature as well as guarding against the possibility of misinterpretation. Dick (1999), in his paper on sources of rigor in action research, makes some useful suggestions to address this problem.

Action research draws upon many sources of rigour which are found in other qualitative approaches. These include: the use of multiple methodologies, multiple sources of information multiple processes for data collection and analysis; comparing data and interpretations to those from other sources including literature and so on.

(p.1)

I found that Peshkin (2000) also provides a useful lens that might be applied to personal narratives. When describing his own work he states that

I conclude my work with the best construction I can create, trusting that I have steered clear of such self-deception and self-delusion that would undermine my commitment to the reason, logic, coherence and the like that I strive for. I conclude with Becker that in social research there are no 'crucial tests of theories, [and that] we don't prove things right or wrong [so] the real test has always been how useful or interesting that way of looking at things is to an audience.

(p.9)

My research includes a quantative study based on student responses to questions about their classroom experiences and a statistical survey based on a variation of a classroom environment instrument which utilized the Classroom Environment Scales first developed by Moos (1974). His final published version contained 9 scales with 10 items using a true or false response format which asked students to rate their perceptions related to the overall learning environment in the classroom. They were,

- Involvement: The extents, to which students have attentive interest, participate in discussions, do additional work and enjoy class.
- Affiliation: The extent to which students help each other, get to know each other easily and enjoy working together.

- Teacher Support: The extent to which the teacher helps, befriends, trusts and is interested in students.
 - Task Orientation: The extent to which it is important to complete activities planned and to stay on the subject matter.
 - Competition: The emphasis placed on students competing with each other for grades and recognition.
 - Order and Organization: The emphasis placed on students behaving in an orderly, quiet and polite manner, and on the overall organization of classroom activities.
 - Rule Clarity: The emphasis placed on clear rules, on students knowing the consequences for breaking the rules, and on the teacher dealing consistently with students who break the rules.
 - Teacher Control: The number of rules, how strictly they are enforced, and how severely rule infractions are punished.
- And,
- Innovation: The extent to which the teacher plans new, unusual and varying activities and techniques, and encourages students to contribute to classroom planning and to think creatively.

The original version was modified by Fraser, Fisher and McRobbie (1996), for the assumption that all students experienced the same learning environment within the same classroom had been under challenge since the late nineteen-eighties. There appeared, for example, to be groups of students who participated more fully than others in class discussion and it was found that those students had a more positive perception of their environment than their peers who did not participate so actively in discussion, indicating that there might be, in fact, a range of learning environments within the same classroom. This suggested the desirability of having a new form of instrument available which was better suited than the conventional class form for assessing differences in perceptions that might be held by different students within the same class (Tobin and Gallagher (1987), Tobin and Malone (1989) and Fraser, Fisher and McRobbie (1996).

A different form of learning environment instrument, to determine the students' personal perception of their role in the classroom rather than their perception of the classroom as a whole, was proposed and developed by Fraser, Giddings and Mc Robbie (1992). There were two forms, a Personal Form and a Class Form, each containing nine categories; *Student Cohesiveness, Teacher Support, Involvement, Autonomy/Independence, Investigation, Task Orientation, Cooperation, Equity and Understanding*. There were ten items in each of those categories, with a five-point Likert response scale of; *Almost Never, Seldom, Sometimes, Often, and Almost Always*. Actual and Preferred classroom environment versions were available.

The instrument was modified to allow it to be used retrospectively (By the time I had perfected the survey instrument, the students had finished the grade seven year, temporality was becoming an issue.)

My initial planning proved to be too ambitious, the logistics of surveying every student in the grade at regular intervals, keeping an ongoing dialogue with all the teachers in the team, and keeping my own journal and professional development notes, proved to be very difficult to maintain in the dynamic environment of a school in the process of implementing significant change. At this stage, I was still attempting to describe and somehow comment on the whole process as it occurred, being both an observer and a participant. It became apparent that the task was too complex and, to be candid, I had not carefully considered what the key questions might be. I clearly had to narrow my field of study, yet retain the validity of my project. I concluded that working in greater detail with four teachers (two teams) and eight students (a gender balanced group of four from each class) and restricting my classroom environment study and general student responses to two of the teaching groups shared by those teachers, might still prove to be a valid research project. I then narrowed the research field to focus on three broad questions that would inform my dialogue; they were questions about what the teachers and students thought the program might be like before they became involved with it, what their views were about the effectiveness of the program, and what they might have preferred the outcomes to have been like.

I started working with the first set of questions early in the first term, following up with further questions at the end of the year and completing the process at the beginning of the following year. I was able to delay the student classroom environment questionnaires and general student comments because the students had remained in the same home groups and, in most cases, had retained their grade seven home group teacher. I maintained a journal, as well as recording observations and notes from professional development sessions and wrote reflections on professional reading throughout the duration of the study.

Initially, when I transcribed the interviews, they were aggregated around the broad questions described above. Thus, I had a chapter describing what the participants felt the grade seven year would be like before they started it, another recording their responses to the questions related to their actual experiences and another, dealing with their thoughts about preferred outcomes. I discovered, however, that it was becoming very disjointed for I was actually trying to impose an order on what was really a complex and fluid situation. The difficulties associated with the temporal elements of educational research became a real problem for me as I found myself trying to comment on the present, reflect on the present and past simultaneously, and to some extent, describe the future. It became a struggle to maintain any sense of continuity. At this point, I considered inventing some new tenses that might allow my work to proceed, something like the 'present-future', the 'present-past' or even the 'past-future'. Polkinghorne (1997) writes about this problem and identifies two types of research.

The 'synchronic' and the 'diachronic', the first presents its support for its knowledge claim in stop-time. The data and analysis are presented without a temporal depth; the second is based on the understanding that research is a practice, a product of human action.

(pp. 8-9)

Whilst Polkinghorne's observations gave me some insights into how I might construct my investigation into the middle school program, there was also a sense of urgency to complete the research project quickly so that any useful outcomes might directly benefit the participants in that program. I was mindful of avoiding the situation, which often happens in educational settings, where the time lapse between

the initial research and the teacher's receipt of any helpful information is too great for it to be of any use to use to the students who were, in fact, the subjects of the study. I had experienced this and, although I knew that teachers as professionals can see the longer term benefits of educational studies, I was determined that I would not inflict this on my colleagues. Eisner (1972) recognized the temporal nature of educational research and the problems associated with it for he believes that the teacher as researcher shifts in attitude and needs through time and within, what he describes as, a "kaleidoscopic array" has be able to recognize the instance in which the research findings or the ideas behind them are applicable and then invent a situation where the research findings can be applied effectively.

I finally resolved the conundrum by working in the present, or 'synchronic', by giving immediate feedback to the participants so that curriculum and organizational improvements could be made and by using the information I had gathered to stimulate discussion in staff-meetings, and concurrently, operating in the future by planning how that research might inform my thesis. This is now, as I am writing, of course, now the past, or 'diachronic'.

Taking this approach prompted a reorganization of the interview transcripts into the form of individual stories about the implementation of the middle school program, grouped in pairs (teaching partners) and containing the stories of some of the students in their classes. I found that the reorganization of the interview transcripts (appendix one) provided an additional lens for my study and actually helped me clarify how I might resolve another issue, namely, telling my own story. I discovered that when I removed myself from the dialogue I could still re-tell each story without compromising its integrity, however, and probably more interestingly, when the remaining questions and observations that I had made during the interview sessions were collated, they read like a synopsis of my own story. I determined that using this resource and my journal notes would be a logical means of placing my self within the study and, in some respects, by writing my own story I could legitimately become both participant and observer. The classroom environment studies would still act as a useful cross-reference and additional resource. This approach proved to be far more illuminating for comparing one story with another, where they were both describing

the same events, and relating the student comments describing the same situation, raised issues that had been hidden in the original format.

Coursework undertaken through the Curtin University Institute program proved to be an invaluable source of inspiration in that it helped me formulate and articulate my ideas, equipped me with practical research skills, and gave me the opportunity to develop strong professional relationships with colleagues who had completed or were undertaking their own study programs. I could not have maintained my interest without the support and encouragement of my tutor who regularly helped me over “brick walls” and out of “holes” that I had dug for myself.

In some respects, what I have produced can only ever be a snapshot that represents a personal interpretation of specific events in a particular school setting. However, I believe, that despite that, the findings do have some validity and relevance in a broader context. Initially, I had thought that my thesis might be based on a quantitative study to determine if there might be a positive correlation between learning success in the Arts and the Sciences; it then became a qualitative research project encompassing the whole middle school experience, and, finally evolved into something else utilizing a range of research tools. The only certainty in this process is that if I were to recommence it tomorrow, it would inevitably be different, for every new article one reads, each new conversation, each journal reflection, brings a new dimension and perspective to the study. However, in some respects, it can never be complete. Therefore, the reader is invited to view this study as a work in progress, rather than a definitive final product.

Chapter Three.

The Classroom Environment Survey.

I used a variation of the Fraser, Fisher and McRobbie (1996) classroom environment instrument utilizing the “Personal Form”. I utilized both the Actual and Preferred versions of the survey instrument. However, the language had been adjusted to allow the instrument to be completed retrospectively. This modification had been successfully trialled on a smaller scale, in consultation with Fisher, in a study undertaken as part of a Curtin University Institute related to learning environments.

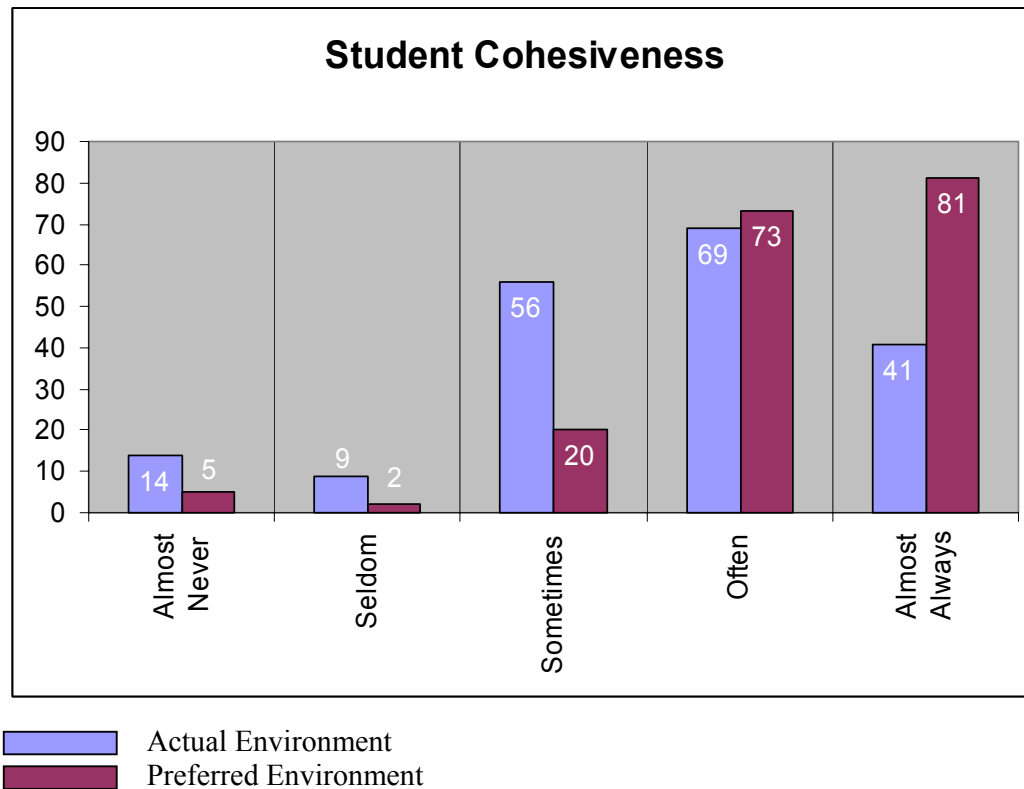
To simplify the interpretative process the results for each category were displayed in the form of a separate, comparative bar-graph, rather than the conventional form normally used with this instrument whereby all the categories appear on the same graph. I believed that the analysis of the survey responses might assist my understanding of the factors that may lead to successful educational outcomes for young adolescents and felt that, perhaps, the quantitative study could also prove to be a useful cross-reference to confirm the validity of the written and verbal comments made by students.

When I administered the questionnaire to class group one there were twenty-four, out of a possible twenty-seven, students present and all twenty-six students of class group two. I introduced the survey in a ‘double’ lesson, a hundred minutes, during the first week of their grade eight year and explained that I wanted the students to recall their observations as they would have been in the preceding year. I felt that the holiday period might have given them the opportunity to reflect on their first year of high school. They had no difficulty with that notion, enthusiastically and seriously completing the survey instrument. They were interested in the process and the reasons for doing the survey. They knew that it was part of a review of middle schooling and also part of my own work at Curtin University, which they were keen to support. They asked to be kept informed of progress and wanted to know what the general outcomes were. The students were anxious to participate and, significantly, there was only one individual who deliberately spoiled the response sheet.

The collation of the responses was straightforward and, with assistance, I recorded each individual response to each question and then consolidated them within the categories of the survey instrument, *student cohesiveness*, and so on. Using a comparative bar-graph for each category worked well and did allow me to visually identify general trends and anomalies within each category. The graphs, which were easy to read, became useful discussion points with the students and teachers, whilst the individual student comments helped develop a more detailed overall picture.

Frequency of Responses to Classroom Environment Items for Group One

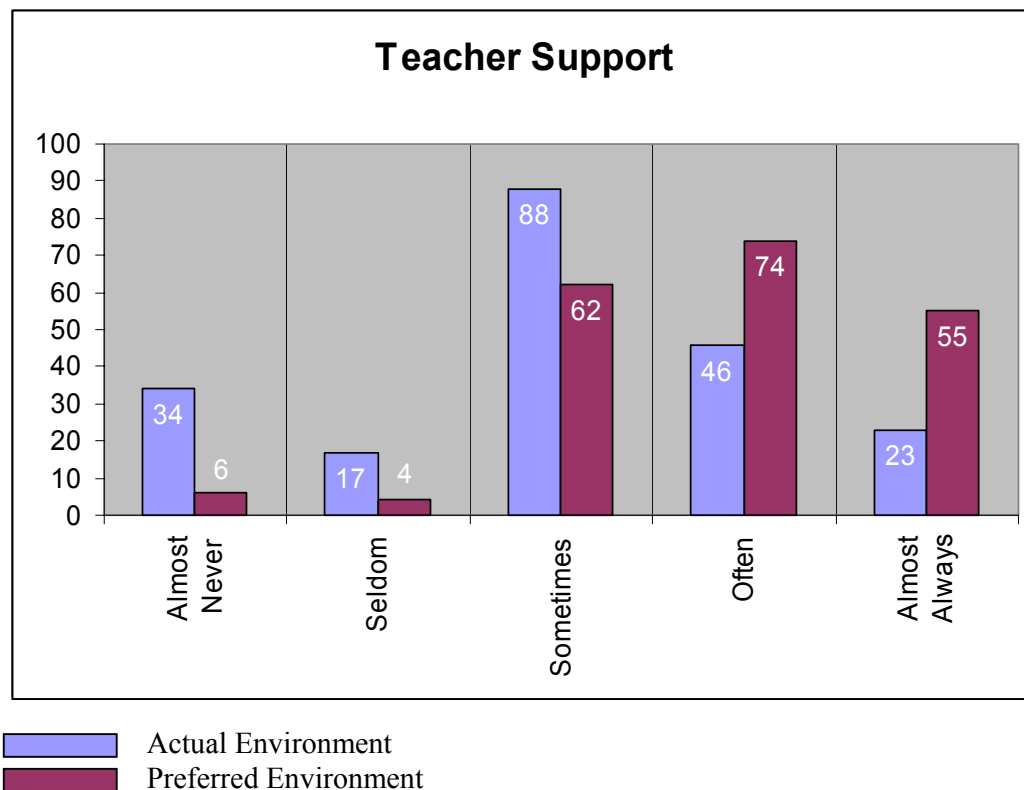
Student Cohesiveness



This was an unexpected result as I believed that this was a well integrated class. A number of them had come from the same primary school and my own casual observations would have indicated that they were a cohesive group. They appeared to socialize well out of class and participated as a group in sporting and social activities. A significant number of students, however, indicated that they would *often* or *almost often* have preferred to have had more friends in the class and to feel more valued by their peers. There was a gender bias, the girls generally valuing a wider circle of friends and social acceptance more than the boys. Jade mentioned being, “worried about being put in a class that was separate from my friends”, whilst Rosie was concerned that “high school would be pretty scary and hard and no one would like me”. My follow-up interviews, however, revealed that there were some boys, who had come from different primary schools, who also felt quite alienated. The teacher

had worked on this issue and improved the situation somewhat. Tim, who had stated that he “would have preferred it if I had been given a different home-group teacher and there were some better people in my class”, confided in me that, whilst the classroom situation had got better, the problems still persisted elsewhere. There were other boys who felt that the overall environment was *almost never* or *seldom* very friendly but, interestingly they were not particularly concerned about this, they had their own small circle of friends and were not harassed in any way by the other class members.

Teacher Support



There were a significant number of students who *sometimes* felt that the teacher was taking a personal interest in their academic progress and social well-being and liked it that way with the preferred score for this category being lower than the actual score. A number of students, however, indicated that the actual environment was *often* or *almost always* lower in Teacher Support than they would have preferred.

There were a few students who actually did not want the constant attention of the teacher as they felt that they could cope quite well by themselves, although they did acknowledge that there were some of their peers who felt that they were not getting enough teacher attention.

Fraser, Fisher, & Mc Robbie (1993) noted similar responses when they used student interviews in the validation process of their New Classroom Environment Instrument. They interviewed students where they identified significant differences between a student's Class and Personal response to selected items in the category of Teacher Support. They found that in response to the item; 'The teacher takes a personal interest in me.'

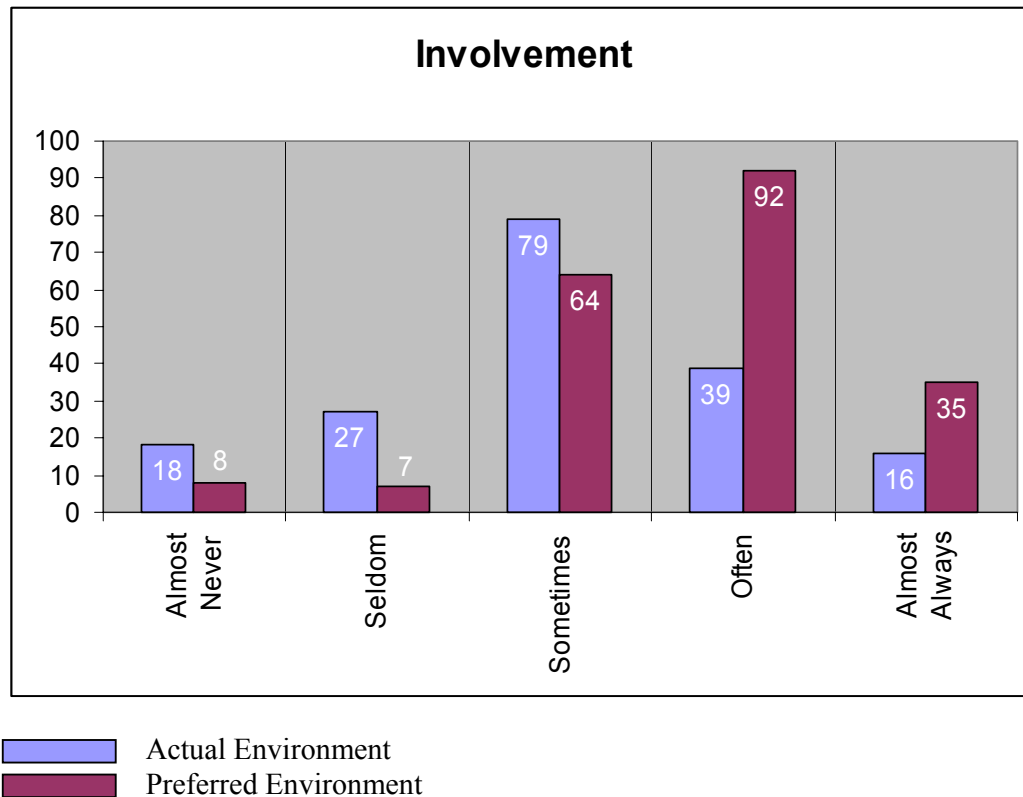
A student had stated that the teacher *often*, took an interest in them in the context of the whole class environment but *almost never* at the personal level. The student had explained

I said that because, whenever the teacher asks me a question, I usually answer it wrongly. So I guess the teacher avoids me and prefers someone who actually can answer the question. She is interested in all of her students, but I think that she chooses people that actually can answer the questions correctly.

Fraser, Fisher, & Mc Robbie (1993, p.13)

It is not surprising that this category is particularly difficult to interpret as the responses depend so much on the student's preferred learning style and the individual level of encouragement that they require. I found that the statistical results alone gave a very one-dimensional picture of what was occurring in the classroom and did not actually describe, what I considered to be, the reality of the situation.

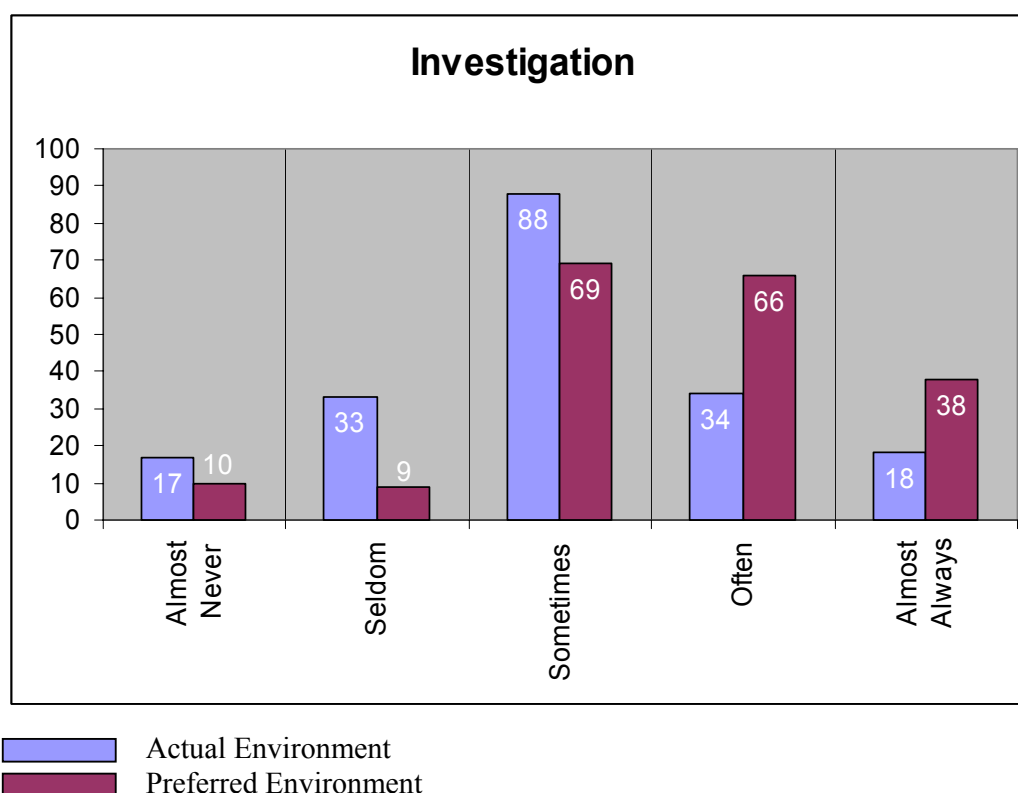
Involvement



The majority of students in this class group indicated that they would have preferred to be *more often* or *almost always* involved in their academic work. This surprised me as I had observed this group working on one of their integrated Science and Humanities programs and was impressed with the level of interest and involvement exhibited by the students. Indeed, some of their visiting tutors and mentors had commented favorably on their efforts.

It appeared that even the highly motivated class members felt that they could have become more immersed in their work. There seemed to be no discernible gender bias in the responses to this category of questions or any bias in terms of academic ability. They all thought that they could have done better. In some respects this is hardly a surprising result as educational environments tend to have philosophical underpinnings that support a culture of 'improvement' to the extent that an individual student, or teacher, would find it very difficult to admit that they could not have been a little more involved in their work.

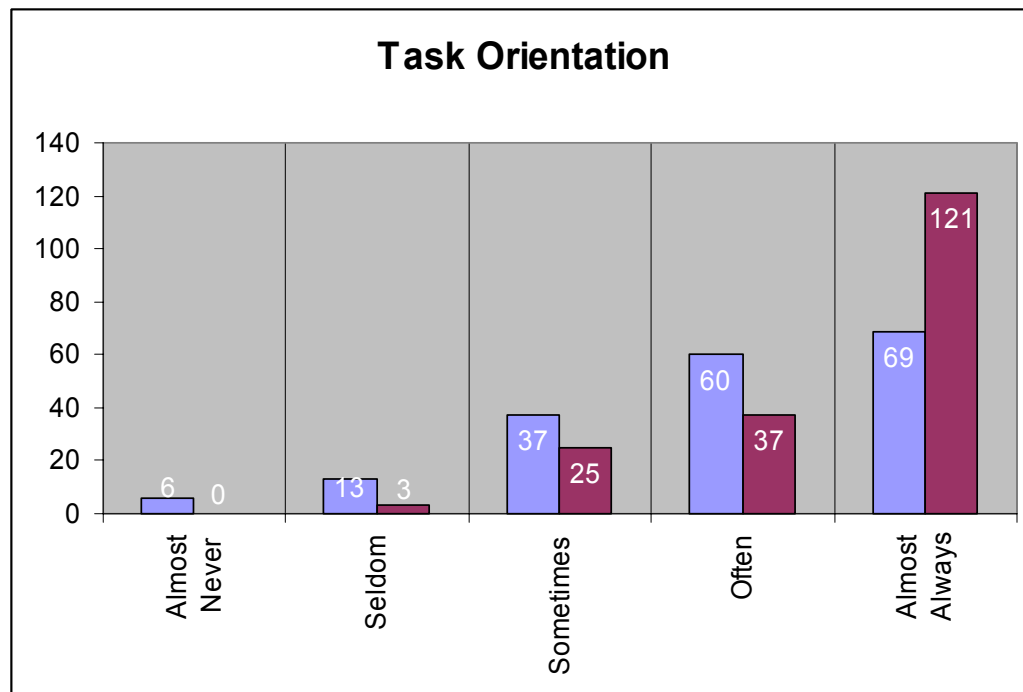
Investigation



The class seemed divided on this issue with a significant group indicating that *sometimes* they would have preferred less emphasis on investigation although some students in this category also expressed an interest in doing more ‘projects’ for homework, which appeared to be contradictory. They were keen to do more research style work on areas of personal interest but felt that sometimes the main-stream lessons were too oriented towards group work of an investigative nature.

This was an interesting result as we had assumed that an integrated, investigative curriculum, based on cooperative learning strategies, would be the appropriate methodology to use in a middle school environment. Indeed, there was a tacit understanding that this would be the case. Darren, in particular, thought that the emphasis on investigation was too much like their primary school experience and was looking for something different and more directed. He stated that he would have preferred, “grade seven to have been more difficult, with less group work where you had to find things out and some classes split into different levels.”

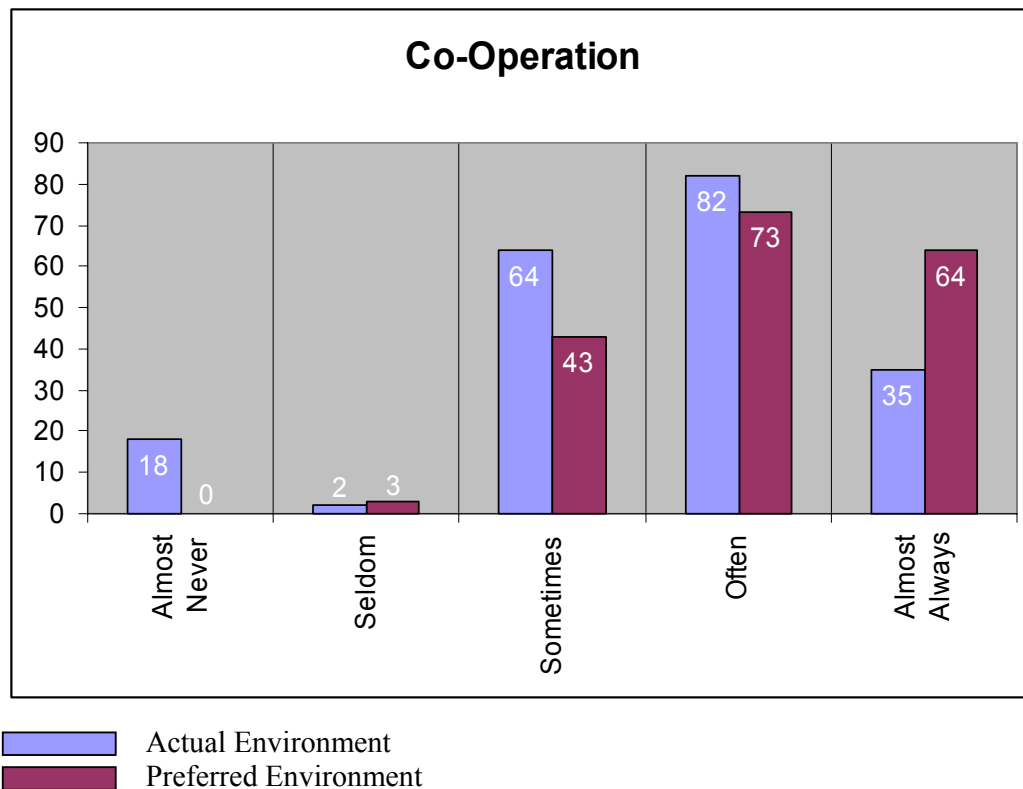
Task Orientation



Actual Environment
Preferred Environment

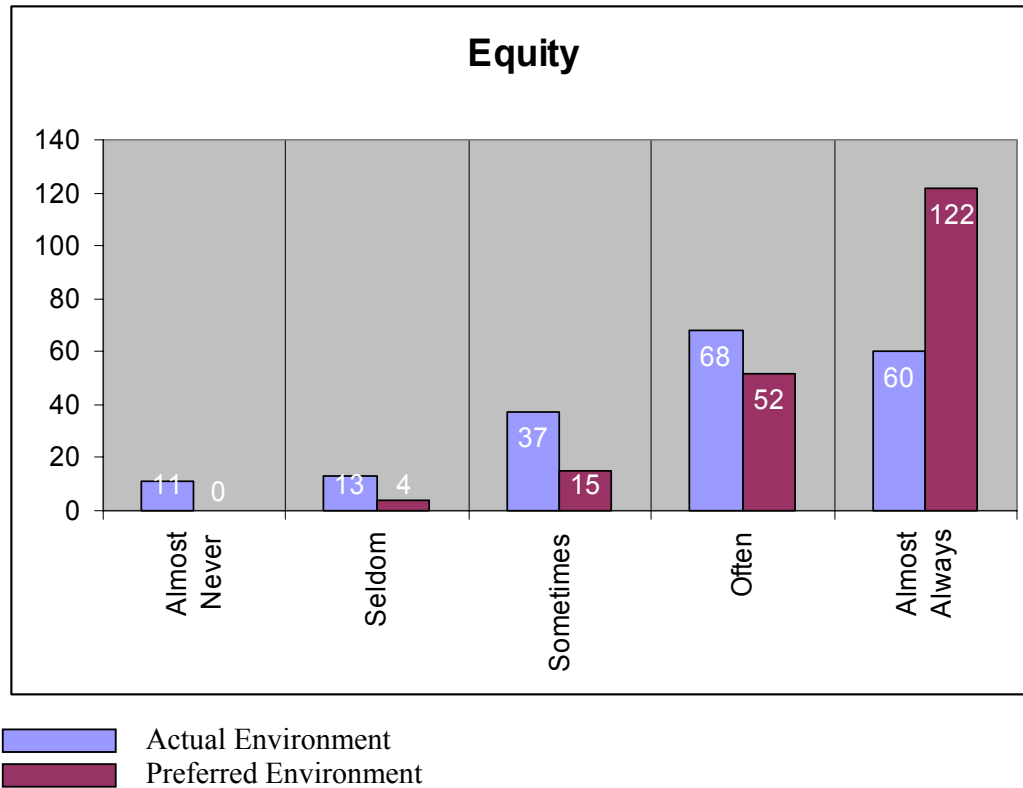
This particular class group was the one that upset my neatly organized scaling system that was based on a highest possible score of a nominal one-hundred. A significant number of students felt that *almost always* they would have preferred to get more work done and know what the class goals were. This actually does correlate with their responses to the ‘Investigation’ category of questions where a number of students had indicated that they wanted more formal work and set goals. I found this very interesting as my observations of this class would have led me to believe that whilst they were highly task-oriented in their approach they appeared to be successfully achieving the goals that they had set for themselves. Indeed, some of the work they produced as part of their investigation of the local ecosystem was highly sophisticated and the public presentation of their work was of a standard that might normally be associated with grade ten students.

Co-Operation



Responses to these questions yielded similar results to those evident in the 'Student Cohesiveness' category. There was a significant group, over half the class, who would have preferred to be *sometimes* or *often* less cooperative than they actually were. In most cases this was not an indication of antisocial behavior, but rather a desire to work as an individual or work with a different class group. Kirsty stated she, "would have preferred it if we had not been so caught up in our own home-group, perhaps changing a bit for some subjects after a couple of weeks," and Simon would have liked "not to be 'trapped' in our grade area, for almost every subject." As in the 'Student Cohesiveness' category, gender differences were reflected in this outcome with the girls, generally, valuing cooperation more highly than the boys, perhaps for the same reasons. The teacher's preference for cooperative learning tasks was again a factor, for what had basically worked well in grade six and early grade seven was beginning to lose its appeal.

Equity



This was the second occasion that this class group upset my one-hundred point scoring system. A very significant group of students would have *almost always* preferred the classroom environment to be more equitable. This was a surprising result as I knew that the teacher in question valued each individual student in their class and was careful to provide an inclusive and equitable environment. The students as individuals considered their teacher to be very fair and approachable. I can only conclude that they made some distinction between what they saw as social equity and academic equity. There were, however, a number of students who felt that they did need more of the teacher's time and attention. It could be that, in an effort to devote equal time to all, the teacher had not been able to accommodate those who needed more time than others. Yet one has to be mindful that the more able students, too, need public recognition and teacher support. Interestingly, there was a gender bias in the responses with more boys than girls preferring a more equitable environment. This would appear to be consistent with the girls' stronger sense of social identity that was evident in 'Student Cohesiveness' category, it had been my

observation, that in this particular class, the girls were more helpful to one another than the boys.

General Observations

The following observations were made by students, in response to the open-ended questions, appended to the questionnaire. The individual commentaries are broadly representative of gender and academic ability. The commentaries should be viewed in conjunction with the statistical analysis and be seen as a means by which the reader may add additional depth and detail to that data.

Jade. “When I was in grade six, I thought high school would be a lot different and I thought that we’d have a lot less freedom. I was also worried about being put in a class that was separate from my friends. When I was in grade seven I found that it was a lot different. There was a lot more freedom and I was in a class with all my friends from primary school so overall there wasn’t much difference. I’m happy with the way things turned out and don’t really know how it could have been better”

Michael. “When I was in grade six I thought high school would be a new adventure but challenging and I thought I’d get lost. I thought it would be hard and I would just be friends with people I knew from primary school. When I was in grade seven I found that it was actually good. Some subjects I did not like but others were exciting and interesting. I made lots of new friends and couldn’t wait for grade eight. In the first few weeks or so I still kept thinking I might get lost or harassed but that didn’t happen though I was intimidated a bit by the other grades because some of the people were really tall, where as in primary school I was used to being in the top grade and people looked up to me where as here they were looking down at me. I would have preferred it if grade seven had been easy, if I had more interesting activities, I would have preferred all subjects to have more exciting projects in them. I would have enjoyed some practical subjects if they had less theory.”

Kirsty. “When I was in grade six I thought high school would be completely different. I expected not only a change of surroundings but a change in myself. When I was in grade seven I found that it was actually more of a community feeling than I

had expected. I knew everyone in my home-group and everyone respected each other. We were part of the school but still a group. I would have preferred it if we had not been so caught up in our own home-group, perhaps changing a bit for some subjects after a couple of weeks.”

Dean. “When I was in grade six I thought high school would be so much bigger than primary school that I would get lost although my brother was in grade nine and he would be a good security figure. I knew there would be a lot of students from different primary schools. When I was in grade seven I found that it was actually just as I pictured it apart from I did not get lost, it took a short time to fit into classes and get to know the teachers. I would have preferred it if we were not ‘trapped’ in our grade area, for almost every subject.”

Rosie. “When I was in grade six I thought high school would be pretty scary and hard and nobody would like me. When I was in grade seven I found that it was actually not scary, only some of it was hard and I had plenty of friends but would have preferred it if grade seven had been non-existent, I was at the bottom of the school and I wasn’t used to grade seven work.”

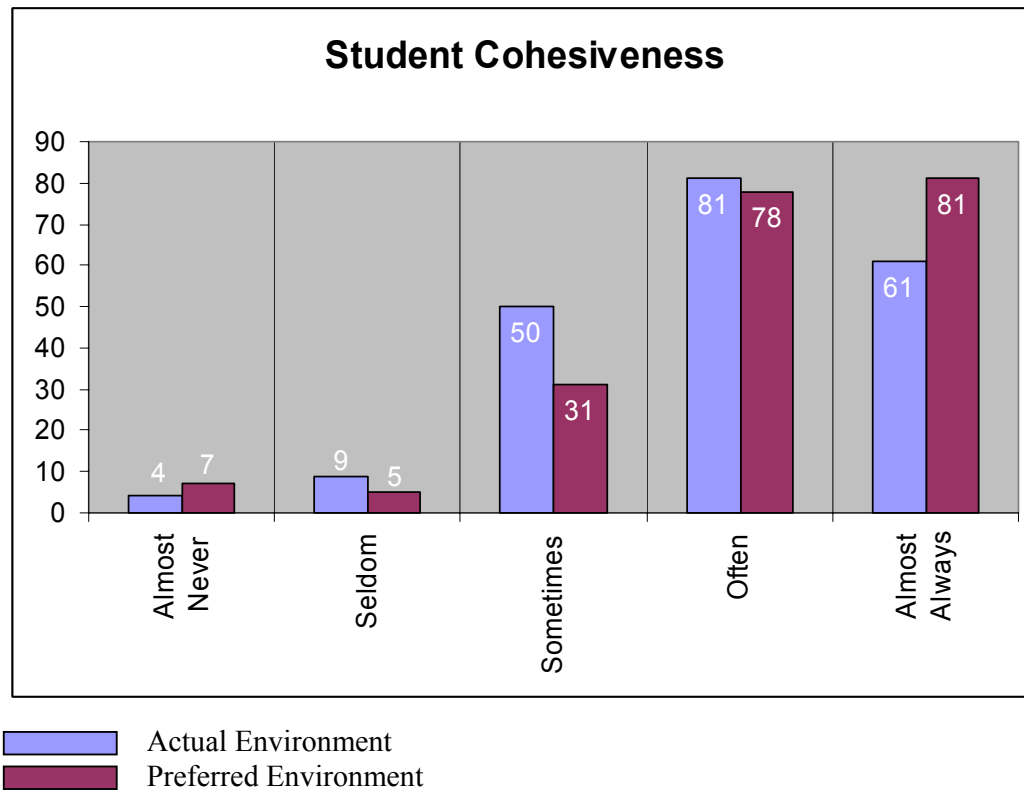
Jessica. “When I was in grade six I thought high school would be scary but still a lot like primary school but much bigger. I thought we’d be on our own a lot and not really know the class teacher very well. When I was in grade seven I found that it was actually extremely interesting, there was much more mixing between the sexes and classes. We were encouraged more to think for ourselves and be involved compared to the last primary school I was at. My first one did these same things. I found that it wasn’t as close-knit and restricting but everyone still became friends. I thought grade seven was fine as it was and I really enjoyed it.”

Darren. “When I was in grade six I thought that high school would be terrible. I did not have an idea how I would fit in, how I would make friends or encounter bullies. I was not afraid but apprehensive while another part of me was excited at the possibilities, but blunted by my caution. When I was in grade seven I found that it was actually terrific. I settled in better than I could have hoped for and made close friends with no trouble. But I would have preferred it if the grade seven work had

been more difficult, with less group-work where you had to find things out, and some classes split into different levels.”

Frequency of Responses to Classroom Environment Items for Group Two

Student Cohesiveness



This was an interesting result from this class which indicated that students did not always necessarily want to be involved in friendship groups all of the time. This is understandable in the context of the year group. The grade seven year is traditionally a difficult one for students because it is a time of great physical and emotional upheaval. It is the time when some of the friendship groups that may have lasted from kindergarten start to re-align themselves. I also found a gender bias in this group's responses to this category of questions. Generally the girls valued strong friendship ties more than the boys. Possibly, the girls have a better understanding of the importance of interpersonal relationships, and that they have a more developed sense of emotional intelligence than the boys, at this stage of adolescence.

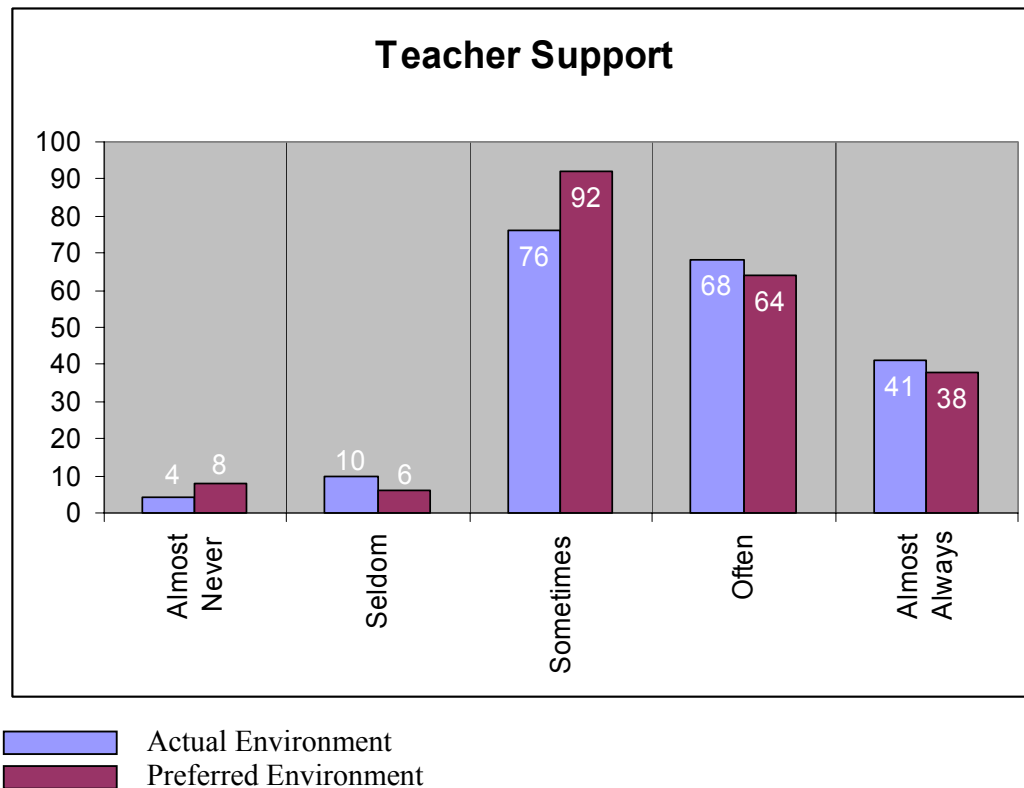
Richardson (2002), in a dissertation based on a study of students in transition from the fifth to sixth grade found a negative correlation between emotional intelligence and the level of trauma experienced by the students. The analysis indicated that, to

some extent, emotional intelligence played a part in easing the transition more for girls than it did for boys. She states that

The patterns of emotional intelligence levels did not vary much over the transition period, and girls seemed to indicate higher levels of emotional intelligence than boys. Emotional intelligence made a contribution to academic performance for girls even when prior achievement and socioeconomic status were taken into account.

Richardson. (2002, p.2)

Teacher Support



I was not quite sure what to make of the response from this group as it appeared that close to a third of the class would have *sometimes* preferred more teacher support yet there were a significant number of students who would have *often* or *almost always* preferred less teacher support. The teacher appeared to recognize and assist those who needed help. I interviewed some of the individuals who had made this comment and was pleased to find that it was not quite the problem that I had feared. Basically, they explained that there was a very supportive teacher but there were times when they knew exactly what they were doing and did not need them to “keep checking”

or “offering advice”. Interestingly, when Fraser, Fisher & Mc Robbie (1996) were validating their New Classroom Environment Instrument, they found similar explanations in this category.

Item. The teacher goes out of his/her way to help me.

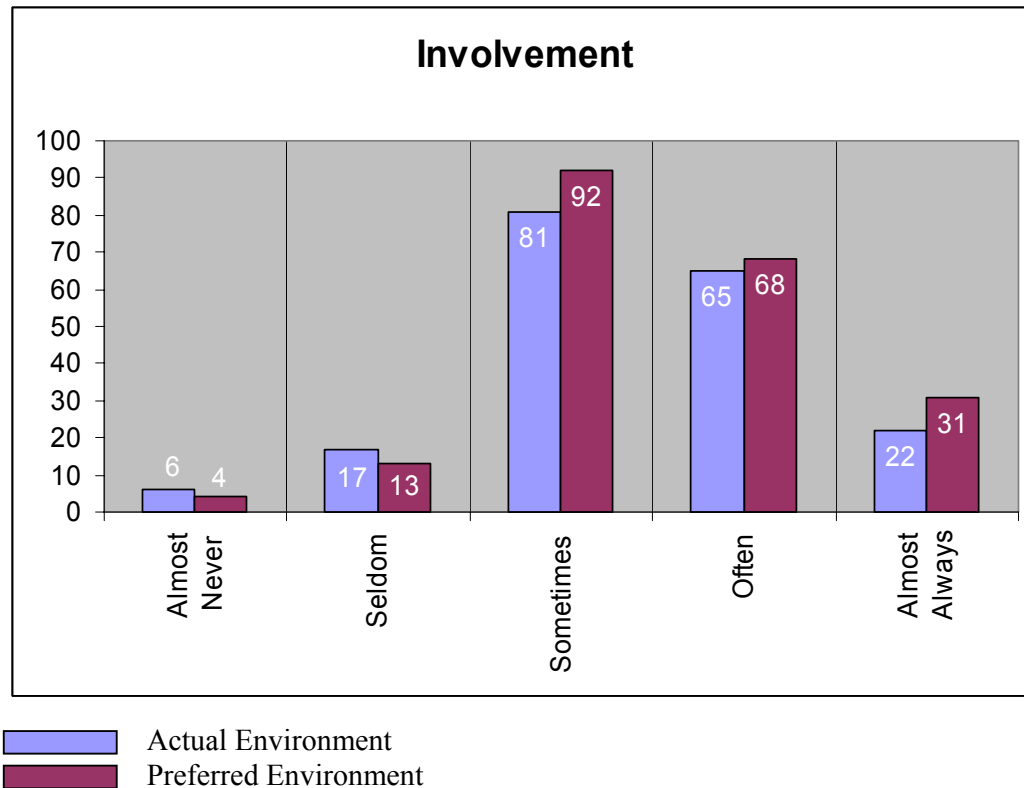
Student two had said that, in the whole class situation, the teacher *almost always* went out of their way to help, however, in a personal sense they *seldom* did so. Student two indicated that, “Some people need more help than others. If someone is behind, he will stop and wait for them to catch up. I normally don’t need to ask many questions because normally I understand the work.”

Item. The teacher helps me when I have trouble with the work.

Student three had stated that, in the class context, the teacher *almost always* helped when there was trouble with the work but they said that in a personal context, this *seldom* happened. The explanation being that, “Sometimes the teacher is not always available, because there are so many students.”

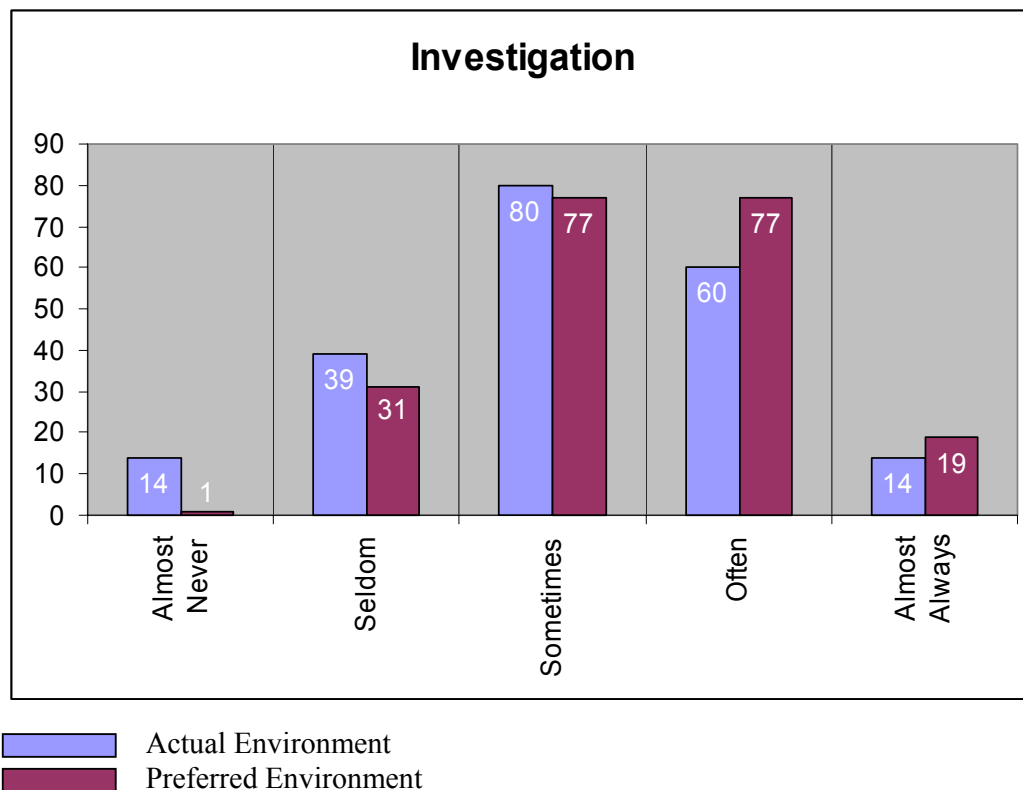
Fraser, Fisher & Mc Robbie (1996, p.13)

Involvement



The majority of the students in this class also felt that they would *sometimes*, *often* or *almost always* prefer to be more involved in their work. I suspect for the same reasons that I outlined in the analysis of the results from Class Group One. The response was universal, including those who normally found schooling to be a challenge, those who found the work well within their capacity and those students who always extended themselves. When I followed up this issue most of the students thought they could do better no matter where they were on the educational scale, apart from a few boys who actually were almost never involved, and would have preferred to be even less so!

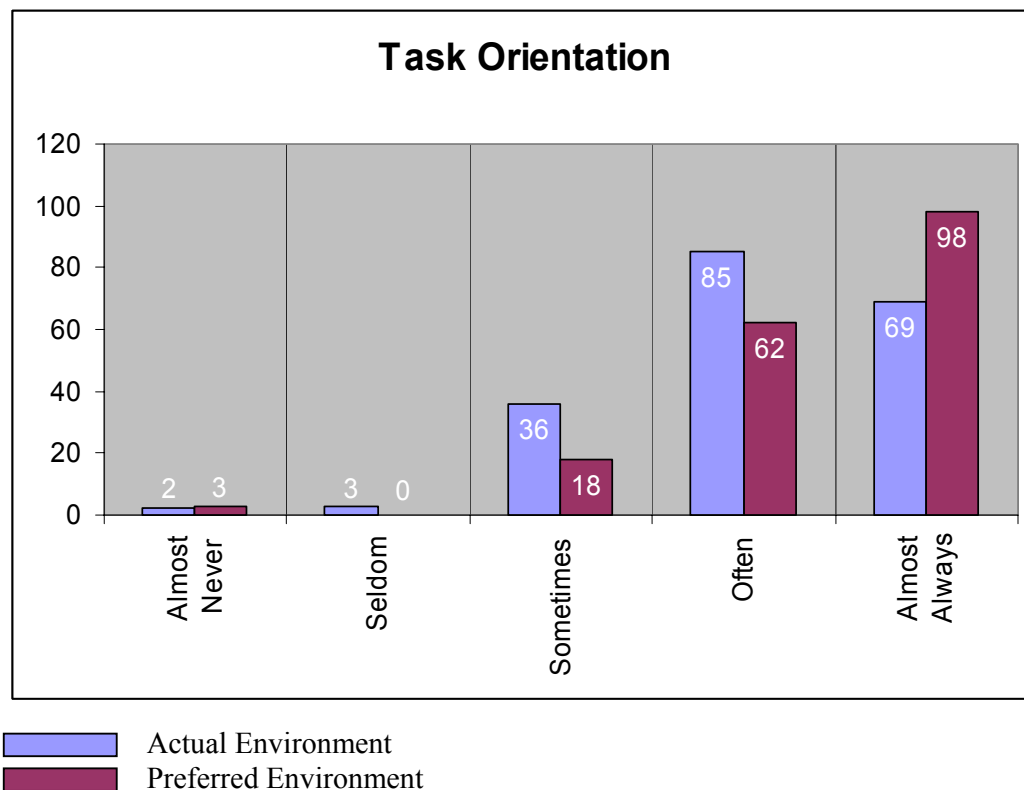
Investigation



The student's preferred learning style seemed to have a significant bearing on the response to the questions in this category, with the class fairly evenly divided in their response. As with Class Group One, about half of them would have *almost seldom*, *seldom* or *sometimes* preferred less investigative projects whilst the other group would *often* or *almost always* preferred more opportunities for research-based work. I anticipated that it might be the less able students who would have preferred a more

teacher directed approach but this was not the case. The findings initiated some interesting discussion amongst the middle school teaching team, for a significant amount of class work had been designed around group investigative programs and, clearly, we had made some sweeping assumptions in this respect. Our deliberations led to a more flexible approach and learning programs where groups of ‘one’, with a good deal of teacher input, were considered to be viable alternatives. There were also some interesting social implications for we had forgotten that there are individuals who like to work by themselves, not because they are anti-social in any way but that is just how they prefer to learn.

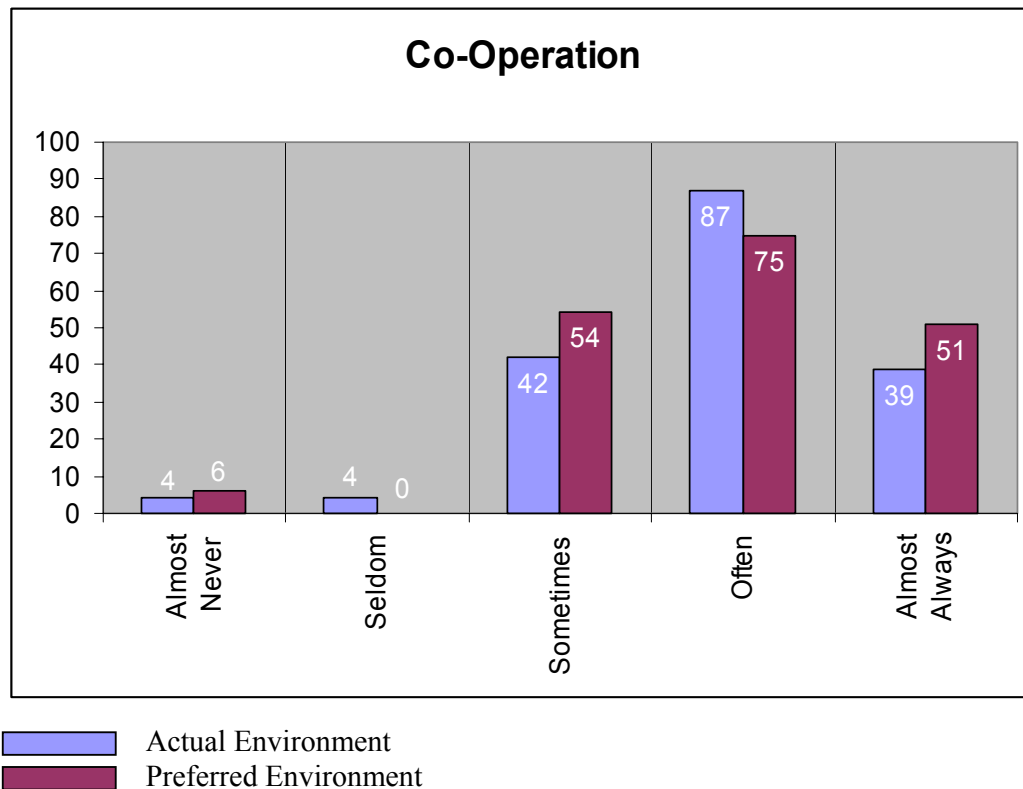
Task Orientation



I initially found it difficult to interpret the responses from this class as they were very different from Class Group One, however, I realized that the pattern was similar although not as extreme. The apparent contradictions became clearer when some of the students explained that it was possible, for example, to clearly know the goals for the class but not necessarily achieve the outcomes they had hoped for. One particular student's responses ranged from one to five across the questions in this category.

Hence, whilst the results indicate that a large group would prefer to be less task-oriented, and that an equally large group would prefer to be more task-oriented, the response can often depend on the particular task in question. I consider that these results confirm my own observations that, with grade seven students in particular, a teacher has to be highly flexible and adaptable regarding both the content of the teaching program and the method of delivery, for the students' preferences can change on a daily basis.

Co-Operation



With this group, too, the responses to these questions yielded similar results to those evident in the 'Student cohesiveness' category. Once again, there was a significant group who would have preferred to be *sometimes* or *often* less cooperative than the actual environment indicated a gender bias was also reflected with the girls valuing cooperation more than the boys. A number of students in this group also indicated that they wanted the opportunity to demonstrate their strengths as individuals, and, as in the 'Investigation' category, was assured that their desire to work on their own was "nothing personal" and "they're still my friends". There is an important issue

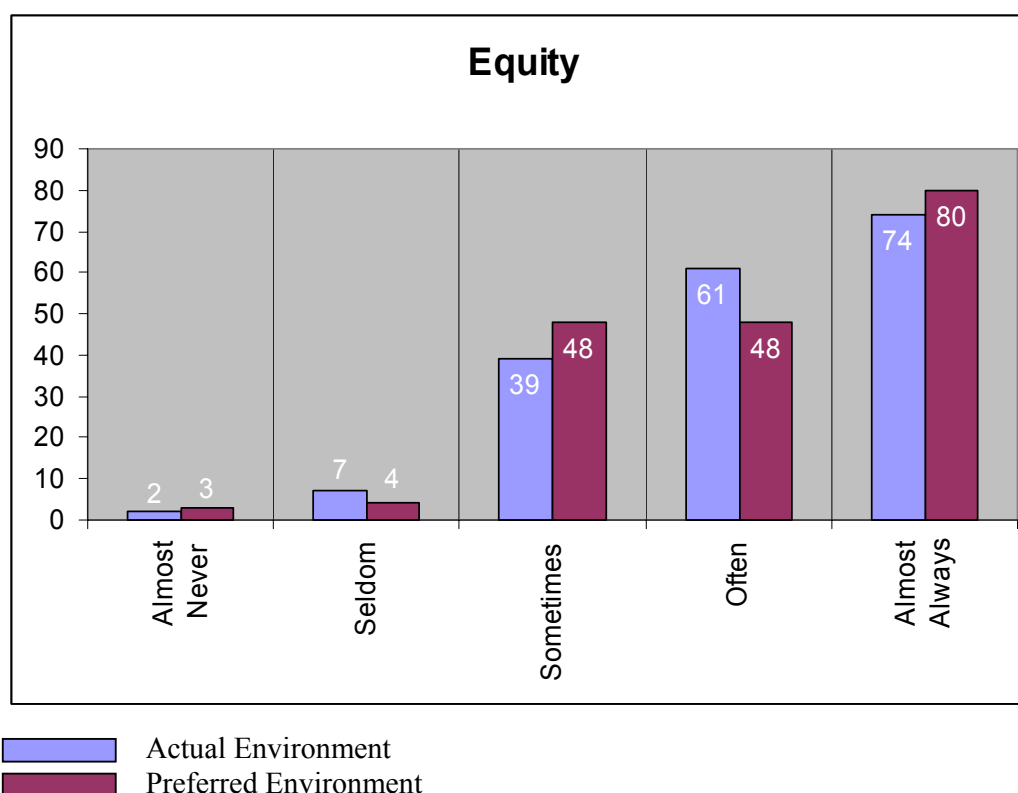
here for educators for we have to be mindful that middle schooling, with its emphasis on cooperative learning through integrated programs, does not become the new and unchallenged conservatism. Chadbourne (2002), in his recent report his report on middle schooling, commissioned by the Australian Education Union, states that

There is conflicting evidence about the success of integrated programs. According to Vas (1991), since the 1940's more than eighty normative or comparative studies have reported that students in various forms of integrated programs performed better, or as well, on standardized achievement tests than students enrolled in separate subjects. Marsh (1993) tracked some of the major research studies on integration from the United States, The United Kingdom and Asia over the past half-century and concluded that although the earlier studies, gave the impression that curriculum integration had many positive elements over single discipline teaching, there is a dearth of evidence of a positive or negative nature over recent years.

(p.2)

The results from this category probably contain one of the most important messages from the whole survey, specifically, that as teachers we must be aware that there may be tensions between our desire for cooperation and social cohesiveness in the class and what may be the most effective learning style and classroom environment for an individual student.

Equity



Another mixed message, with as many students *almost never*, *sometimes* and *almost always* preferring more equitable treatment as those who *often* wanted less equitable treatment. The results, however, were not as extreme as they were with Class Group One. Many individual responses ranged across the whole score range in this category. My interviews with students indicated that there were times when they did not actually want public recognition, teacher approval or to visibly contribute to a class discussion. I was relieved to again find that most of the students considered their teacher to be an equitable person and thought that they would be able to get a “fair go”, even if they did not actually want encouragement all the time. A few students mentioned that they recognized that a number of their peers required more attention than they did but still considered that to be perfectly equitable. Indeed, as one perceptive student succinctly explained, “You did not need an equal amount of help to get an equal result”. Which I felt clearly highlighted an issue that required further study and action by the Grade Team.

General Observations.

The following observations were made by students, in response to the open-ended questions, appended to the questionnaire. The individual commentaries are broadly representative of gender and academic ability. The commentaries should be viewed in conjunction with the statistical analysis and be seen as a means by which the reader may add additional depth and detail to that data.

Leonie. “ I thought grade six here in Australia would be harder than where I come from and high school even more because you have to do a lot of work. But somehow I did not attend grade six and skipped to high school from grade five. When I was in grade seven I found it was actually hard for me because I found it hard to understand and do the tasks given.”

Bradley. “When I was in grade six I thought that high school would be much more rugged than primary school with people sometimes disobeying teachers. Also I thought it would be a bit more violent, but I guess some of the thoughts were obtained by rumors. When I was in grade seven I found in the first few weeks I was a bit intimidated mainly because of the size difference, although after a while I started to settle in. Finding friends took a bit as we had only been here for about one year but after the first couple of months I started to make a few friends. I would have preferred it if I had made more friends in grade seven.”

Katie. “When I was in grades six I thought high school would be big and scary. I thought you had a lot more independence and had to take responsibility for your own work. When I was in grade seven I found that it was actually smaller and you get lots of help to fit in to high school. You learn ten times more whereas in primary school it seemed like you’re learning how to learn. I would have preferred it if in grade seven the classes had been more mixed with different people, instead of the same class. That way we would have got to know more people and have a diverse range of views and ideas etc.”

Kevin. “When I was in grade six I thought high school would be better. I thought I would be a big high school student and there would be a lot of hard work to get done.

When I was in grade seven I found that it was actually not hard at all, the work in grade seven was easier than I had been led to believe. All my friends were in my home-group so it was pretty much a laugh; it was cool because there were a lot more people to do stuff with. I would have preferred it if grade seven had been harder. I think there should have been more work to get done so the rest of the grades would be easier. The classes should have been mixed more.”

Bronwyn. “When I was in grade six I thought that high school would be a place where independence would be a big thing and students would take control of their own learning. I thought the work would be hard and the teachers would be strict. I thought the teachers may not take much interest in me as a person, rather the work. When I was in grade seven I found that it was actually not as independent as I had thought. The students were friendly and the days were exciting. The teachers looked after the class and were interested in the students. I would have preferred it if grade seven had been more independent and there had been more mixing with other classes for different subjects apart from that grade seven was a good year because it was a new experience.”

Trevor. “When I was in grade six I thought that high school would be different, different teaching methods more grown-up, but still the youngest in the school. There would be interesting new things but it would still be school, it would be harder it would be big. When I was in grade seven I found that was actually different, that there were different ways of going about things. There were interesting new things but it was harder than primary school much more demanding and harder marking. I would have preferred it if grade seven had been more organized, both myself and my work.”

Jasmin. “When I was in grade six I thought that high school would tired to study because a lot of time teachers talk was a long time. So I thought ‘not funny’. When I was in grade seven I found it was actually fun because I had a lot of friends and I understand the very importance of study.”

Stuart. “When I was in grade six I thought high school would be fun, I thought it would be fun having a timetable for my different classes. I thought that I would do

really well because I really like doing new things. When I was in grade seven I found that it was good at first but after a while I got used to it and it was no different to primary school and I started to slack off. I would have preferred it if grade seven had been more organized.”

Some Observations.

Follow-up work consisted of a number of individual and group interviews and reference to other sources such as student reports and test results, and a comparison of mid-year and end-of-year reports. I was particularly interested to determine if there had been a general improvement in outcomes for each class and for individual students. I identified students who had made significant progress by the end of the year and students who had actually achieved better outcomes in their mid-year assessments. It was difficult to make valid comparisons as we had changed the number of assessment criteria and work habit categories in the intervening period. However, there appeared to be a group of students who had achieved more ‘A’ and ‘B’ ratings at the end of the year than at the mid-year reporting period. Yet, there were a number of students who had been less successful, and had appeared to have reached their peak of achievement half way through the year. I interviewed two particular students, one who had improved significantly and one who had not. **David** had stated that he enjoyed the practical elements of his work and had liked the challenge of solving technical problems. He felt that he had contributed a great deal to his group when working on projects and found that he had skills that the other members valued, and he felt good about that. He thought that combining the Science and Humanities programs had made them more interesting and said that he was surprised at how well he had done in Science and how he thought his English had also improved.

Katrina mentioned that she did not enjoy the integrated Science and Humanities unit and had problems cooperating with her group, whom she considered to be too disorganized. She had not been satisfied with their efforts. However, she had enjoyed the variety of tasks but wanted more definite parameters to work within. She stated that she would have preferred a quieter, more settled environment than the one in her classroom. She did explain that she had been told that she would be going to another

school so she, “wasn’t trying too hard”. Interestingly, she did not actually make that move until half way through the following year.

I found the classroom environment instrument to be a very useful indicator of what was occurring in the class. The students seemed able to distinguish between the past environment and current environment, they were genuine in their desire to participate in the process and I was not aware of any deliberate manipulation or sabotage on their part. A few students became very interested in the actual process and suggested that, perhaps, teachers in other areas should allow them similar opportunities. Indeed, participating in the process encouraged a number of students to articulate their views about other issues of concern to them.

As a means of entering into a rich dialogue with students the survey instrument was as effective as it was in actually collecting valuable information. I wondered about this and the possibility that questionnaires could be administered with the primary purpose of starting a dialogue through the follow-up interviews. However, this was not my purpose.

I have found that, generally, young adolescent students volunteer information about social issues yet only comment on curricular issues when asked directly. The responses to the questionnaire appeared to confirm my own observations, however, I do not see this as a deficiency but, possibly, a way of validating both my own intuition and the instrument itself. I believe that this type of classroom environment research instrument may be particularly valuable in a situation where the teacher may have limited regular access to the students. It might also be very useful, particularly the “Preferred Classroom Environment” component, to use with a new class early in a semester, term or year. Its usefulness lies, I feel, in its capacity to gain an overall insight into what is happening in the classroom and its facility to highlight individual responses that may require further investigation and action. However, it appears that to achieve a ‘true’ picture, a combination of approaches needs to be made, a situation where quantitative data, qualitative observations, interviews and the teacher’s own intuition are somehow combined.

Yet, it would appear that, ultimately, the value of any method may be determined as much by the new questions that are raised, as by the information that is provided. I believe that the 'Classroom Environment Instrument' met that requirement.

Chapter Four.

Voices from the Classroom: The Students and Teachers

Tell Their Stories.

Compiled from the transcripts of interviews with students and teachers (app. 2).

There is no implied hierarchy in the way that they are presented in class sets.

It has been said that,
In the social sciences there is only interpretation.
Nothing speaks for Itself.

Denzin. (1998, p.313)

Whilst I acknowledge that this statement may have some validity, I believe that it is possible that a story, re-told truthfully, can ‘speak for itself’. It is my intention to support this claim by having the ‘subjects’ speak for themselves for I believe the voices within the classroom to be a rich source that provides valuable insights into educational practice

I had contemplated inserting intervals in the narrative, at what I thought were significant points, but did not, as I considered that process in itself would become another form of interpretation.

Who gets to tell the educational stories significantly affects which stories get told and which perspectives achieve the status of knowledge.

Gitlin & Russel (1994, p.199)

Sarah, Andrew, Emma and Neil were students in Richard’s home-class. Richard and Christine taught the class for two-thirds of their timetabled learning program. Sarah and Emma had attended the local primary school, although they were not close friends, Neil and Andrew had both attended other primary schools and, consequently, were not members of any existing friendship groups. The students were making satisfactory academic progress, with Sarah having most success. Emma and Neil, however, had experienced some social problems, particularly in their relationships with other members of the class group.

Sarah said that most of her ideas about high school had come from an older brother who would tell her things and from other friends in grade six who had heard stories from older students who were trying to scare her and make it sound worse than it was. She anticipated working on her own initiative more than she had been used to, with less teacher support than in primary school. She thought that there would be an emphasis on getting work in on time and that she would have to do this without assistance. Sarah was slightly worried about bullying, that the older students, particularly from grade-nine and grade-ten, might pick on her. However, she found that it was not what she was expecting particularly at the start with everyone being friendly and the teachers really looking after her. She found the experience to be “really exciting for the first few months”. Sarah enjoyed the timetable and course structure, particularly the new experiences like Art and Cooking which she had not done before. Her worries had been dispelled on the first day and she wanted to go back on the next, but would have preferred it if she had been given more independence as she found the experience a little too much like primary school. She wanted it to be a real change but found herself still doing everything with her home-group. Sarah thought it might have been better if she had been by herself more often and given the opportunity to join other classes for some subjects so she could get to know other people, she would have liked a few more mixed classes.

When **Andrew** was in grade six he thought that high school might be frightening and violent and that it would be more intimidating than grade six with its large numbers and bigger students. He had formed these ideas from listening to the stories told by his friends and the rumors passed around by older brothers and sisters, things like getting his head flushed down the toilet. He had remembered being told things like that.

When he started high school he felt a bit nervous because he expected the work to be demanding but found that it was within his capacity yet different from what he had been used to in grade six. Andrew did feel uneasy at the start as he did not know many other students although, he said, that it only took about a week for things to get better and that it improved even more when he made some new friends during the camping trip. He felt that, overall, the transition from primary school was satisfactory

and enjoyed staying in the same classroom with the same teacher for most subjects. He found that it was not too confusing finding his way around the school. He would have preferred it if he had known a few more people before he started as he discovered that a number of students were from the same primary school and they “picked on” the new people in the class. Andrew stated that the teacher had tried to deal with the situation and that there had been an improvement but he felt that depended on the teacher being present, as it took much longer for things to improve outside of the classroom. However, he still enjoyed being in the same class for most subjects explaining that once he had made some friends he did not want to keep changing them. Andrew mentioned that he would have liked the work to have been more demanding with personal projects for he found that it was mostly set-work and if it was completed in class time there was not much homework. He did acknowledge that the work did get harder and that he preferred it that way. Andrew thought that a longer lunch break would have been better so that he could do more things, however, generally he found grade seven to be a positive experience.

Richard was an experienced teacher, who had taught for more than twenty years. His expertise was in the field of Science and Mathematics education. Richard had been at the school for ten years and was well regarded by his peers, the students and the community at large. He shared his class, designated as Class Group One in the classroom environment survey, with Christine, who taught the Humanities elements of the curriculum.

Richard had taken an active interest in the middle school debate and was one of a group of teachers who attended a national conference on the topic. He had discussed his ideas with the principal who was keen to develop and implement a middle school program in the school and Richard, being aware that other schools had already gone down this path, was keen to become involved. He had attended the conference with a number of colleagues and found the experience to be inspiring and it confirmed his own view that curriculum and organizational changes in his own school were long overdue. He felt that it was time to review the traditional subject-based program, particularly for the grade seven students and possibly look towards reforming the whole junior school program.

Richard returned from the conference in a positive frame of mind believing that what he had experienced was the key to improvement and was optimistic that steps would be taken to initiate a process that would lead to the implementation of similar programs in his school. He mentioned that under the guidance of one of the assistant principals, who had also attended the conference, there was a concerted effort to raise the whole staff's awareness of the issue and believed even at that early stage tentative plans for implementation were being made. Richard organized and delivered a number of presentations at staff meetings, where he had related his experiences at the conference and outlined the implications for the school if the plans were to go ahead. He knew that a great deal of professional development would be required if the plans were to succeed.

He recognized that processes needed to be in place early in the year if the new system was to be operational by the following year and was concerned when, by mid-year, little progress appeared to have been made. Richard sensed an element of urgency developing, a "last minute panic" and a tension developing between the school's time-table administrators and the assistant principal responsible for the development of the new program. He thought that there was a growing realization by some faculty heads that there would be problems with the staffing of a number of senior classes because a number of the teachers who traditionally took those classes had expressed an interest in working in the middle school. There was a reluctance to remove, what they saw as, their more experienced staff from the grade nine and grade ten classes. He perceived that there was a cohort of senior staff who were beginning to view middle schooling as a disruption to their existing learning programs. Richard believed that some quick and creative solutions were required and explained that one of the themes of the conference had been about the time frame required for the introduction of such programs: "whether you did it incrementally or whether you just went straight into changing the whole structure." His feeling had been that the school should do it quickly as he recognized that there were a number of teachers who would take advantage of a lengthy process to resist those changes with which they were uncomfortable. He described the mixed feelings of frustration and excitement at that time while the issue was undecided and how things progressed quickly when the final decision to go ahead was made. Richard was asked to draft a timetable proposal and was able accommodate the key elements in terms of teachers,

core curricula and, what he termed, “negotiated time.” His proposal was on the basis that the middle school should operate as an independent unit, which for him was an interesting possibility and consistent with his own views about the most effective way to educate the younger students. He described how early in third term there was a sense of starting on a new venture; that the teachers who were going to be involved were working well together and were full of enthusiasm. But the year ended with a degree of apprehension as the operational elements were still not firmly in place. So the middle school program started the following year with some degree of confusion and frustration. However, as Richard explained, the participants were sufficiently motivated, with such a strong belief in how the program should operate, that they managed to get through the uncertain months at the start of the year and their enthusiasm allowed them to implement some effective programs.

He felt that even at the beginning of the program there was conflict looming between the teachers in the grade seven team and some of the other staff. He believed that the tension was a result of the ongoing difficulties with teacher allocations and a perception that the middle school staff were being offered a disproportionate amount of professional development opportunities. Richard believed that this caused some resentment, but saw that the grade seven team was actively trying to put into practice the philosophies and issues that were being discussed at the professional seminars and workshops. He felt that there was also reluctance by other staff to express too much interest in the program in case they discovered that it was actually succeeding and an improvement on past practice, what he termed, “a sense of fear that they would actually see things that they really knew were better which might point to limitations in their own teaching programs.”

However, he thought that the students adapted very well to the program and that this was confirmed by the first set of reports that were issued, indicating that excellent progress was being made. Richard mentioned the overwhelmingly positive comments from parents, particularly in the first interview sessions after the release of reports and noted the few discipline problems at that stage. He was personally disappointed that the attempts to implement the “negotiated time” option were not very successful despite the fact the teachers could, in theory, take students out of the school without having to inform the whole school community in advance, and that

they were potentially free to do so, as they had their own budget to enable that to happen. Richard felt that by the second half of the first year there were moves by other staff, particularly some subject heads, to limit the grade seven program as they saw the middle school initiative “as the cause of their own problems with the timetable, budgets and so on and wanted to nip it the bud before it got extended elsewhere.” He suggested that the school’s administrators should have been committed to a five year plan to implement the proposals for any significant change in the school’s culture to occur. He believed that the program was never given a real chance to succeed, for the team did not expect to get things exactly right in the first year, or even the second, but did anticipate that by the third year everything should be running smoothly.

Richard believed that it would be difficult to make significant changes in the school as there were so many individuals who had a vested interest in maintaining the status quo, and, that when there were limited resources one program often was supported at the expense of another. He was disappointed that the school lost, what he saw was, an opportunity to demonstrate that it had a vision and the capacity to implement that vision. He felt that the school had lacked direction for a number of years and could have developed a reputation for the excellence of its middle school program. Richard stated that there was no doubt that the staff involved in the development of the program had made a determined effort to succeed but that when it was clear that the initiative was being undermined as the amount of effort required to maintain the program became too demanding and a feeling of disenchantment started to develop.

The biggest worry about high school for **Emma**, when she was in grade six, was not being able to do the work, that the work would be too hard and that she could just not manage it. She had gained this impression from other grade six students and from watching television shows where there were people not coping and thought it might be like that for her. However her brother had been to the same school and he did say that it would not be too hard, although he did suggest that it might be challenging. She was also concerned about getting lost, having to ask teachers where to go and apprehensive about making new friends. Emma actually had a difficult start to the grade seven year as she felt that she was not very popular. It took her a long time to

realize that people were not as “scary” as they were made out to be. After that the situation improved. She found that the work was not as hard as she had feared. It was more involved though generally enjoyable depending on the teacher she had. Emma thought that most of the work was challenging enough for her, with some subjects being harder than others. She did state that the way she approached a subject depended on which teacher was involved and explained that if she had a “good” teacher she would want to do the subject and if that was not the case then she probably would not, no matter how interesting it was. Fortunately, for Emma, she found that her grade seven teachers were “pretty good”. She would have preferred it if some of the students had not been so difficult. She described them as being discriminative about physical appearance and this caused some difficulties for her. She was trying hard at school and having some problems at home so it would have been better if these individuals had been more accepting. Emma did not actually like being in the same class for most subjects but thought that it was a way of making things easier for everyone, although it meant that meeting new people was more difficult.

When **Neil** was in grade six he thought that high school would be huge and frightening with lots of people and that they would not know where to go. He believed that the work would be much harder and that there would be bullies, smoking and drugs. He said that he had got these ideas from television shows about high schools and from what other people had said. Neil described how students in the year above them had visited them in grade six and told them these stories and how their teachers had said that the work was going to be much more difficult. His greatest worry was that he would not know many people. However, he found that it was not as intimidating as he had anticipated and that there were not any “real bullies”, not much smoking and little in the way of drugs unless one really looked for them. Neil explained that there were separate areas where those sorts of students went. He found the work easier than he had been led to believe by the primary teachers but was not disappointed that it was not any more difficult. He observed that perhaps the work was like that so that the students might settle in and the teachers could get to know what they were capable of. Neil would have preferred it if he had been happier. He said that there were only two friends in his home-group and that the teacher was often unsettled and never very supportive of him. He mentioned that

most of the people from his former primary school were in another home-group and that there were a number of individuals in the class who thought they were “pretty clever” and did not talk to people whom they considered to be their inferiors.

Christine had been a teacher for fourteen years, having worked in a variety of schools, where she specialized in the Music and Humanities areas of the curriculum. She had been appointed to her present position as an English and Social Science teacher. This had been at her own request because she found the demands of family life made it difficult to meet the extra-curricular commitments required of a Music specialist. She shared her class with Richard, who taught them Science and Mathematics.

Christine did not volunteer to be a member of the middle school team. It was not until late in the preceding year that she was informed that she was to be involved in the program in the following year. However, she was aware of the basic concepts of middle schooling, having participated in staff discussion about the proposal, but did not express an interest in working in the area. She was observing the situation aware that there were still some unresolved issues which she believed to be personality based rather than any philosophical disagreement. Christine was certain that there would be a sufficient number of volunteers for the program, although she was concerned that there was much basic structural planning yet to be done, and that ultimately some sort of selection would be made. So, she “just stayed back from it”, being very surprised when she was told that she would be involved in middle schooling the following year and that she was expected to be present at the first team meeting.

She had attended that meeting and realized that she had to find someone as a partner. Christine considered that Richard was an obvious choice, as they had worked well together before and believed that, in most cases, the other partnerships had already been established. Despite being appointed rather than volunteering she was excited at the possibilities offered by a new type of student organization and different style of curriculum. She felt that the program had great potential. Christine had taken a leadership role in the development work that had already been done in the Humanities area of the curriculum and saw an opportunity for further development

and integration. As an experienced teacher she realized that adequate time would be needed for the development the new programs but had a realistic understanding of the limited resources within the school as whole, and the competition for those resources. However, she was disappointed when that time did not appear to be available.

Christine had been a Performing Arts teacher and stated that, in her experience, programs that were not properly prepared and coordinated just did not work out very well, but still felt positive about what could be done with the situation as it was by “trying to make it work.” She thought that, from the outset, there were going to be problems with some of the regular school staff and that there would be difficulties with time-tabling and resources, but found that she had underestimated the degree of resistance.

Christine found that she did develop a positive working relationship with Richard, particularly enjoying the joint Science and Humanities projects that they designed together. She mentioned that the flexible teaching programs that they had initiated, within the negotiated time allocation, had been really successful and that it was a retrograde step when the concept was gradually abandoned because of time-table difficulties. She believed that the professional development sessions had been the highlight of the program for her as she noticed a correlation between her work towards a Master of Public Administration degree and the issues discussed in the professional development sessions. Christine discovered that many of the managerial concepts, that she had assumed to be administration specific, could be reinterpreted in a classroom environment and, interestingly, discovered that many of the issues discussed within an educational setting appeared to directly applicable to within an administrative context. She specifically mentioned theories of leadership, conflict resolution, and the nature of organizational management. She believed that, “whether teachers like the idea or not, schools are bureaucratic organizations and that part of the difficulty experienced by the middle school team could be attributed the fact that they were trying to develop appropriate organizational forms that were consistent with middle schooling, whilst the rest of the school was still stuck with a model that Weber would have recognized.”

Christine believed that, what she saw as a lack of communication with the whole school staff and parents inevitably led to difficulties that became apparent early in the first year of operation. She felt that there had been no clear communication that stated precisely what the middle school program was about; what it hoped to achieve, what its methodology might be and what outcomes were hoped for. Christine stated that the failure to communicate consistently and effectively led to the erosion of the middle school as other staff, who were not included in the discussions, did not consider themselves to be part of a continuing process. She believed that some teachers and parent groups felt that they had been alienated and therefore felt threatened by the program. Christine thought that most of their specific problems were related to this lack of communication, and stated that some of the difficulties would not have occurred if the parents had clearly understood the priorities of the middle school. She also mentioned that some problems tended to become personalized as parents could identify a particular teacher who was responsible for a significant proportion of their child's education, which would not have been the case in as more traditional high school structure, where they would have had to deal with the school rather than an individual. She explained that on the first parent-teacher interview night, at one point, there were eighteen people lined up to talk to her and that she had to explain the program to each one of them. She stated that some had been angry, not specifically with her but with a lack of information. Christine said that she had expected some formal support from the school management but that it never eventuated because there was, in fact, no school-wide consensus about what the program was hoping to deliver. She did not attempt to apportion blame but felt that there had not been sufficient opportunities for the middle school team members and the school management team to meet together to focus on the broader picture, and that the middle school team were too busy, trying to survive and keep their ideals alive on a day-to-day basis.

However, she did say that, for her, there were many positive outcomes, particularly the relationships that she developed with her class and the collegiality that was evident amongst the members of the middle school team. Christine valued the opportunity to discuss educational issues with colleagues and identified a personal and collegial sense of curriculum ownership to the extent that she had felt angry, on behalf of the whole team, when a staff member, not closely connected to the

program, had been disparaging about the team's plans. She explained that she felt uncomfortable when the Learning Area Managers visited the classroom, for she thought that "their real purpose was to ensure that their particular subject was being taught 'properly', or rather, the same way that it always had been."

She was very positive in her view that the new curriculum had provided challenges for the students, by getting away from, what she termed, "linear thinking where everything was in a predetermined progression," with the result that the students had been able to develop their ideas in many directions. She described this as a program that recognized the importance of learning being a generative activity which was delivered in a style that acknowledged the importance of critical thinking. Christine believed that this approach encouraged the students to think constructively which, in turn, encouraged the teacher to constantly re-examine their own role.

Christine believed that the experience of working as a member of the middle school team had actually changed her views about teaching and learning, and stated that she believed that the majority of the plans that had been formulated in the staff development sessions had become a positive reality.

She would have preferred it if there had been more assistance from the school's management team as she had expected more support in terms of facilitation and communication. Christine felt, perhaps due to her own personality, that she had been judged by the general school staff, but this had been countered by a, "great sense of community within the team, we valued one another, the behavior problems were minimal because we all supported one another, and when you did have a problem you didn't feel exposed by admitting that there was a problem. The provision of the appropriate physical resources, things like alterations to the classrooms, a wet area, study rooms and computers, etc. would have helped. We had the human resources, and they were outstanding, we just needed support from the timetable and some of those physical things and it would have worked brilliantly. I wouldn't have changed the staff group, and for me, who was instructed to do it, I was so pleased with how it turned out."

Kerrie, Peter, Donna and **Shane** were students in Lynn's home-group class. They were taught principally by Susan, who was responsible for the Mathematics and Science program, and Lynn who taught English, Social Science and Art. The students had attended the same local primary school, apart from Peter, whose parents had recently moved into the area. Kerrie and Donna had made good progress, with Donna, in particular, achieving excellent academic results. Peter and Shane had experienced some learning problems with Shane, particularly, finding some of the work to be challenging. They all had developed a good social relationship with their teacher and fellow class members.

When **Kerrie** was in grade six she thought that high school was going to be very big, everything would be on a larger scale and the work would be a lot harder. She thought that the teachers would be a lot more formal than those in her primary school. Generally she believed that it would be "really scary" and was particularly worried about how hard Mathematics might be. However, she discovered that in grade seven the work was within her capacity and did not find it as difficult as she had anticipated. Kerrie thought that she had made an effort to succeed and that the teachers had proved to be supportive and were really quite friendly. At first she had problems adjusting to separate periods and moving classrooms but eventually found that she preferred that type of organization. But she would have liked the grade seven program to have been more exciting with, what she termed as, "more fun experiments" in Science and more practical things like Woodwork. Kerrie would have actually preferred less teacher intervention and felt that she did not need someone looking after her all the time to see if she was "going alright."

Peter believed that high school would be hard, with really challenging work and an environment where it would be difficult to know where he should be for any given lesson. He was worried about going from the highest grade in one school to the lowest in the next and concerned about missing the bus or getting the wrong one, yet was curious about what new subjects would be available. He was nervous at the beginning, however, he found the subjects to be quite interesting, and although he did not know many people to start with, after a few months he had made some good friends. He gradually became accustomed to the different type of curriculum but

stated that he found the work in grade seven to be much harder than he had been used to in grade six. Peter would have preferred grade seven to have been a little easier in some subject areas, with less homework and he would have appreciated more projects, because he enjoyed that type of activity. He mentioned that he would have really liked a better classroom for the home-group, one with good heating and better desks, as his, in particular, was chipped and drawn on.

Lynn had worked at the school for five years, providing specialist services for students with specific learning difficulties and as an Art teacher. Her previous appointment had been to an urban primary school, She was an experienced teacher with twenty-five years service in a wide variety of school settings. She had taken an active interest in the middle school debate and had enthusiastically volunteered to be a member of the teaching team. She shared her class, Class Group Two of Chapter Three, with Susan, who was responsible for their Science and Mathematics program.

Lynn thought that working in the middle school would be about team building and team work and, as that was her preferred style of teaching, was looking forward to the experience. She mentioned the advantages of mutual support, the way ideas might be developed and the vitality that could be generated. She believed that the environment for the students would be more like that found in a primary school with an emphasis on integrated curriculum and building positive social relationships within the home-group class. She thought there would be a team of teachers working with a team of students with all of them having a sense of belonging and caring for one another, both staff and students. Lynn was disappointed with the existing structure which she described as disconnected and compartmentalized believing that by the time the students had reached the senior grades they had still not developed any real sense of group identity. So she hoped that a more caring style of teaching, where the students had fewer teacher contacts, might prove to be better. She pointed to the simple things like not having to write “hundreds” of reports about students she hardly knew and felt that writing fewer, in greater depth and detail, would have to be an improvement.

She explained that she had thought that, after two years of discussion and planning, the school fully supported the new initiative and that she expected there to be

physical changes within the school to support the new program. Lynn was concerned because, apart from being allocated a dedicated building, not much else was done. She had anticipated that there would have been things like the merging of classrooms into shared corridor space, specific wet areas, and so on. She was disappointed and described how it was basically how it had always been, a separate room, a chalkboard in some instances, some desks, a teacher and some students. Lynn felt that there was a lack of communication between the middle school team and the rest of the staff, what she described as a “them and us” situation, a growing feeling of not really being supported, in fact, being criticized, without any attempt to discover the true situation.

She thought that the pairing of teachers was a really sound idea but found that there were problems as with seven home-class groups there was always going to be one class that was organized differently from the others, making it difficult for the staff to work as a “big team”. However, she really enjoyed the experience of working with her partner because they could really “spark off” one another and achieve great things, although she found initially that the process was quite slow. Lynn felt that the program should have been based on a two-year plan so that the teaching teams would be working together for a longer time with the same group of students. She described how, in the second year, she had been allocated a new class and found that to be quite difficult despite it being a “fairly easy” class to teach. She had no previous experience of a middle school program actually in operation, and felt that she needed time to develop programs and strategies, believing that some extra free periods would have helped organize her thoughts. She considered that she had been given a heavy teaching load in light of the innovative nature of the program. Lynn described how there were certain problems with the timetable that were not resolved, particularly a plan to give the students some “negotiated time” where they could follow programs of their own choice. She felt that this was an excellent idea that was never fully developed to the detriment of both staff and students, as the program could have been extended to cover all areas of the curriculum. She had hoped that there would have been a more flexible timetable but felt that what actually happened was still a fairly traditional arrangement in grade seven and then very formal, “back to square one,” in grade eight where there was no flexibility, apart from arrangements made in their own time to a swap classes with a colleague. One thing

she regretted was the lack of any in-school assessment or evaluation of the program because she intuitively felt that the students' academic progress and their relationships with their peers and staff had improved but that was not acknowledged in any formal way. Lynn also felt that a lack of any independent evaluation had caused problems when it came to identifying any shortcomings that would need to be addressed in the future.

She believed that the particular cohort of students was no different from any other grade group, with a wide range of academic abilities and some serious social and behavioral problems, yet they appeared to be one of the most settled grades that she had experienced working with, she felt that the program must have had some positive features. However, she was disappointed that there was no formal relationship between the initial team of teachers and the team that started the following year, that there was no real sharing of what they had learnt from the experience. She explained that the next group had developed a number of ideas that had been proposed by the first team and had to put some of those plans into action which made her feel as though she been excluded from the process. Lynn believed that the most significant difficulties were caused by the fact that the school had had three different principals during the planning and implementation stages of the program; one who valued it and started the process, then an acting principal who was anxious not to make any controversial decisions and finally a new principal whose real priorities and values were not known.

She would have liked the program to have continued with some improvements rather than “fizzling out” to a point where the junior school program had, as she saw it, reverted to past practice. She believed that all the work on developing an integrated Humanities and Science course had been wasted in some respects as she felt that all the effort was an indication that the school was committed to the establishment of an integrated middle school program as a long term policy. She felt that this, “no longer appeared to be the case, leaving the primary school liaison officer with the task of selling a ‘half- baked’ program to the parents.”

Lynn described how in the grade seven team the Humanities and Mathematics and Science teachers were developing an understanding of each other's subject area as

well as developing skills in other fields like, Art, Materials Design and Technology, or Physical Education, believing this to be the most positive outcome of the program. She compared this with, what she believed was, the situation in the senior school where she observed that this was not the case. Lynn cited this as one of the prime factors in the “them and us” situation that had developed and pointed out that most of the faculty heads predominately taught the grade nine and ten students. She felt that she was learning about middle schooling while she was doing it and that she had not actually been given the opportunity to utilize those skills to their full potential. Lynn explained that as a group of people working together they had got to know one another and sorted out some of the problems but “just stepped back” They had worked hard at it but did not want to be “constantly fighting for it.”

Susan had been a teacher for twelve years and was appointed to the school as a Science and Mathematics specialist. She had held that position for three years. Her previous appointments had been as a researcher in a scientific laboratory and as a teacher and administrator in a small, isolated, community school, where she had developed a close personal relationship with her students and their families. She shared her class with Lynn, who taught the Humanities program.

Susan hoped that the middle school program would offer an opportunity to work in a high school setting but with an emphasis on the close relationships between teachers and students that might be found in a primary school. She was anticipating that there would be flexibility in the arrangements regarding the timetable and staff allocations that would allow teachers to work together on programs that were more integrated in nature. She believed that there would be a basic structure to work from, one where she could team up with a colleague to develop ideas for joint projects that would be planned and implemented together. They could actually share resources and have an arrangement where it would be easy to arrange guest speakers and mentors for the students and organize out-of-school activities on a regular basis. However, in the first instance, she found it difficult to work effectively with her partner. She had many ideas that she wanted to try, ideas related to bio-diversity and environmental issues, yet had found it difficult to convince her that this would be a valid basis for a curriculum. Susan knew that she wanted to integrate the Sciences and Humanities programs, however, as she did not want to do it on her own she had to wait until their partner took some tentative steps. She was anxious that it should not appear that the

whole program was her own personal initiative. It was when the partner started to suggest some ideas that she felt able to make her own contribution. This process took about eight weeks yet, in hindsight, she felt that things had actually worked well. Susan explained that they had started by relying on text books but soon reorganized the program to take advantage of community support and visiting “experts”. She believed that the program had been highly successful however she reviewed it, changed some elements and, generally, learned a lot a great deal from the experience. She believed that her partner had initially expressed some reservations because the program was very different from previous practice, and making a commitment to an unfamiliar style of curriculum was a difficult step for her. Susan started with a Science focus which caused some difficulties for her partner until she realized that she was already looking at similar issues in her Humanities program. As Susan stated “she just didn’t see it that way to start with and in the end came up with lots and lots of exciting ideas.” She was disappointed that her partner did not record her observations about the Humanities element of the program which meant that there was no documentation that described the program in its entirety. Susan noted that some of the Science topics had not been integrated with other subjects as, she believed, to do so would have been inappropriate. She explained that the point of her curriculum was that it was realistic rather than contrived or an exercise in integration for its own sake. She believed, “that the program was realistic, that it was real.”

Susan stated that she had developed her competence to the extent that she did not have to rely on teachers from other parts of the school to provide expertise. She described what she had achieved as, “not necessarily an integrated curriculum at all, that it would be probably the wrong way to describe it, it was just a different way of looking at the curriculum, just another way of teaching where the curriculum was not broken up into too many separate pieces. However, my partner thought that everything had to be connected and that was part of the problem.”

Susan wanted to look at, what she termed, the big issues, things that would make the students aware of what the world was really like and the questions that would make them think about their own place in the world. They were questions about who owns the world, about poverty, about the status of third-world countries and so on. She believed that it was unimportant whether they were introduced from a Science

perspective or not, provided that the issues were addressed. She wanted to design a Science curriculum around those topics. Susan felt that, although these questions might traditionally be an element of the Humanities program, they could also be a solid basis for a Science curriculum. She anticipated some resistance from her colleagues in the Science faculty who, as she saw it, were very traditional in their outlook. She stated that she would have welcomed the opportunity to manage a Science department which would have enabled her to apply, on a broader scale, some of the strategies that had proven successful in the middle school program. Susan believed that, “it would be wonderful to invite colleagues into my classroom to demonstrate that it is possible to teach in other ways, not better, just slightly different, but in ways that value the students and their opinions.”

Donna thought that high school was going to be huge, that she would have no idea which classes she should be going to. She was nervous about mixing with all the new people that she would not know and had been told stories about being bullied. She enjoyed being at the top of the primary school but, also in a way, could not wait to move because she thought it would be “so mature.” Donna had also heard that there would be lots of fights and some drugs going around, which made her very apprehensive. However, she actually found it to be different than she had been led to expect as there were not any drugs that she knew about and very few fights. She commented that her home-group teacher knew exactly how they all felt and made their class into a tight friendship group. But outside of the classroom she did not know many people so tended to socialize with her primary school friends and did not really start to mix more widely until about half way through the year. Donna found that the work was challenging but interesting and achieved very good overall results. She mentioned that she would have liked some free periods for her own study, more independence and some sort of “special subjects” where she could choose her own topics. Donna would have liked opportunities to be in other class groups as she wanted to mix with different people.

When **Shane** was in grade six he thought that high school would be the way it was in the television shows, that he would probably get harassed by older students, however he was not really sure about that. He believed that the teachers would be really strict, but expected more freedom than in primary school, but really did not know what to

expect. Grade-seven had been much better than he had thought as he had a very supportive home-group teacher and even after the first day he felt more comfortable. To a certain extent, Shane had a few problems with the grade-seven work, which he described as not being relevant at the time. Although he did acknowledge that this might have been a form of preparation for other grades. He would have preferred a longer lunch break, perhaps just for the grade-seven students, so that he had more time to do things with his friends. Shane thought that the early start was acceptable but would have preferred a later time, yet he did appreciate the early finish. He would have liked less homework, or maybe “good homework”, what he described as, “interesting things like projects that followed my own interests”. Shane expressed an overall satisfaction with his introduction to high school.

Chapter Five.

Tom's Story.

Introduction.

This chapter explores the possibility of taking reflective practice into unfamiliar territory, in that a persona is actually created to tell the original story. Tom is a constructed character, whose purpose is to maintain the aesthetic of the preceding chapter, whilst providing a vehicle for autobiographical self-research, which may then be subject to analysis and interpretation. It is though the voice of Tom; the voice of the author; and the voices of the educational research community are coexisting within the same framework, yet are still disconnected from one-another.

It might be suggested that an autobiographical account, written by the researcher be considered the least independently verifiable and objective form of data collection available to that researcher. Yet self-research is viewed as a legitimate form of inquiry. (Bullough, Jr & Pinnegar (2001), Conneley & Clandinin (1998), Hankins (1998), Polkinghorne (1997), Powell & Chandler (2002), and Taylor & Settelmaier (2003)). This form of research is described by Denzin and Lincoln (1994) as being part of a "Fifth Movement" where questions about relationships and process become central to an inquiry. They note that this center is found in,

The humanistic commitment of the qualitative researcher to study the world always from the perspective of the interacting individual. (p, 275)

If the author is both participant and inquirer in that study, it would be difficult to claim that they were unable to make some valuable contribution to that inquiry. Tom is a device which enables the author to turn a teacher's story into a self-reflexive narrative whilst allowing the voice from the classroom to be freely heard. This may add another dimension to the research project. Self-reflexivity is described by Salner (1991) as

The capacity to analyze the self's intentions, thoughts, actions and reactions as if they were objects, that is, as though they emanated from an 'other'. This self-reflexive capacity for controlled distance comes about as a result of deliberate cultivation of a zone of objectivity within our subjective experience wherein our own

involvement in the portion of the life world that we are studying is
acknowledged and deliberately 'played with' in a creative way
(p.1)

It is my intention to use Tom's story, compiled from transcripts of the material recorded during a series of interviews, to provide a new lens through which one might view the events that are the subject of this study. In addition to providing another viewpoint, Tom's story identifies some of the themes that are embedded in the narrative accounts to be found in the preceding chapter.

Tom's Story.

Tom had thirty years experience in the teaching profession, and had worked at the school for one year prior to his appointment as coordinator of the first group of grade seven students enrolled in the middle school program. He had taught in a number of schools, but principally in a rural high school where he had worked, in a variety of roles, for twenty years, finally as manager of the middle school program and coordinator of the 'junior school'. Tom's area of specialization was as a teacher of Art and Humanities, however, he had also worked as a teacher of Technology and held other general administrative positions.

Tom, who had already experienced working in a middle school environment, had some pre-conceived ideas about the form and structure that would be most appropriate for its successful implementation at his new school. He explained that he had worked in a smaller rural High School where in each grade there were about one hundred students, which allowed the grade seven to be divided into four class groups with a core 'home group' teacher. The teachers were 'paired' with a partner, one Mathematics-Science specialist and one Humanities specialist, but they also worked closely as a whole grade team. His role as grade coordinator and head of the junior school, grades seven and eight, allowed him to work towards developing a curriculum program that would continue through grade seven and into grade eight. This is what he expected would happen in the new environment and believed that involvement in the middle school program would be preferable to the collection of 'odd jobs' that he had been allocated on his appointment to the new school, which entailed working in the Technology Department, teaching some Art and Humanities,

and having responsibilities for some curriculum development, and other administrative roles. Tom welcomed the opportunity to take a leadership role in the middle school project.

It proved to be very different from his previous experience in that the teachers had been appointed to the team for many reasons; he stated that, “Some volunteered for the right reasons, others did for, possibly, the wrong reasons, whilst others did not volunteer who possibly should have done so”. But he felt that it actually worked very well even though, to some extent, he considered that he also had been personally drafted. Some had definitely been allocated to the team and others ‘strongly encouraged’. Three of the teachers had been appointed to their positions, in one case despite their protests, but providing an element of balance were those staff anxious to be involved. They had volunteered from the very beginning, and were keen to get the program started. Tom commented, however, that the outcome of this process was very interesting for when given the opportunity to allocate themselves a partner the teachers appeared to have chosen one from a different category of appointment. He said, “It could not have been better even if it was organized that way,” as it meant that each team was, in a way, self-supporting as there was an individual who was uncertain about the program and somebody who really wanted to be involved in it, working together. The enthusiasm of the ‘volunteer’ staff encouraged their partners to develop new approaches to teaching and learning whilst the practical experience of the ‘appointed’ staff ensured that the new programs were effectively managed. He believed that, in some respects, this arrangement saved the program from an early demise as a number of the teachers who had been drafted actually had a strong credibility rating amongst the general school staff and were not necessarily seen as too radical in their approach to teaching and learning or part of a middle school faction. He noted that although his previous experience had been with initiatives that relied entirely on staff self-selection he was beginning to understand that this, possibly, might not always be the best course of action and that at some point one should, “sympathetically select people for these sorts of things.”

Tom believed that if the staff selection process had a deficit it was the lack of an additional subject faculty leader as a team member. The school’s existing administrative structure was based on a management group headed by the principal,

and included the assistant-principal and the heads of the English, Humanities, Mathematics, Science, The Arts and Technology Departments. He suggested that having the head of Science or the head of Mathematics as a team member would have strengthened the program and ensured a greater acceptance amongst the management team and the general school staff. He noted that he was the only member of the management team with dual responsibilities. He would attend meetings, where he was representing both the Arts and the middle school, but there was no reciprocal arrangement by which the faculty heads were required to attend middle school meetings. The faculty leaders were invited to the middle school team meetings, some attended and were usually delighted with what they saw, but they had to be encouraged. He felt that they always needed an explanation about what the team was doing and then, invariably, everything was fine, but there was still a tension and the unresolved issues pertaining to the ‘ownership’ of the curriculum and the allocation of physical resources were still there.

Tom stated that the uncertainty of the organizational arrangements did generate extra work for the team in that they often had to repeat tasks such as producing a formal traditional report for the subject faculty and a more generalized statement for the parents. The faculty report would have “The usual boxes for the subject criteria, and so on, but there would then be a far more detailed comment about the actual unit of work which the student had done, a comprehensive description of what they had done and what they had achieved” He believed that the parents really appreciated this and there were high levels of attendance at parent-teacher nights and other occasions when there was work to view or presentations by the students. He acknowledged that there were a few problems with a small number of parents who had not fully understood what the program was trying to achieve but they usually discussed their concerns directly with the grade team members as they were seen as having responsibility for the curriculum. He believed that the positive side of that relationship was the significant amount of good feedback from the parents and the knowledge that they felt comfortable expressing their concerns.

Tom stated that he had anticipated difficulties, but believed that, in general, the first year of implementation had been a qualified success, although he noted that a number of the middle school team members and some of the general school staff had not seen it that way. He described a key issue as the failure to establish a school-

wide, commonly recognized, overall purpose for the program. The middle school team worked cooperatively to establish their own aims and objectives but felt that they were given little clear direction from the school's managers who appeared unsure of their goals; whether they were progressing towards developing a middle school in terms of a timetable structure, a social organization, a curriculum model, or a combination of those elements.

He concluded that the school's administrators had not decided exactly what they were trying to achieve when they created a grade coordinator's role which was different from previous practice in that it had a curriculum as well as a student welfare and student management responsibilities. It meant that an additional element was added to the existing subject-department structure despite the middle school practice of developing teaching programs that did not fit into traditional subject-oriented 'boxes', yet the middle school teachers remained, to a certain extent, accountable to the subject faculty heads. The team members thought this to be an unnecessary constraint, whilst the faculty heads saw the arrangement as a loss of control and influence. The team recognized that this caused some anxiety but still found it difficult; for example, when they had to seek resources from a faculty head who may not have been involved in the initial discussions about middle schooling or did not support it. It was acknowledged that for a subject coordinator it was difficult to relinquish control over a whole grade of students particularly as they feared that they were in danger of losing a quarter of their budget. This did not happen although Tom recalled that in his original draft proposal to the principal he did recommend just that. He had suggested that ultimately, if the middle school program were to cater for a quarter of the student population, it should be allocated a quarter of the staff and a quarter of the school's budget.

Tom noted that a number of the teachers who had actually done some of the groundwork had moved on to other appointments. One of the key teachers, who had attended an international conference on behalf of the school, had been transferred and the principal, who really supported the program, had been promoted to an administrative role within the Education Department. He described, what he saw as, a lack of "any parentage or ownership" but he had decided to make the best of the situation by assuming that it remained high on the school's priority list, believing

that there was still an opportunity to be part of an exciting initiative that might ultimately result in a two-year program with an integrated curriculum and the possibility of combining classes across the grades for some purposes. Despite significant difficulties and a lack of universal support, Tom felt that, ironically, the middle school team made more progress than he had achieved in his previous appointment.

He stated, “We had been working on it for two or three years in my previous school and still didn’t really have it running as it could have been. I believe that in one year, with a shaky start and under-resourced, it actually progressed further than anticipated, but few people recognized that it had happened.” He thought that the success was due to an emphasis on curriculum development, putting the style of learning first, rather than concentrating on the organizational structures. He explained that at his previous school they had spent a lot of time on getting the “mechanics” of the organization right, making it seem like “clockwork”. It was not until the second or third year that the team started seriously redesigning the curriculum. “It ran as an organizational structure, with each teacher having a class for a significant amount of time, but beyond that there was not much else.” He thought that they were still using the same ‘labels’, they were the same subjects. The key teacher, who was responsible for the pastoral care and the Mathematics- Science or Humanities element of their ‘home’ group’s curriculum, continued to teach their students what they would have described as, Mathematics, Science, English or Social Studies, and so on.

Tom suggested that a major cultural shift had been achieved in the new school, to the extent that teachers in the middle school team would not have described their activities and priorities in terms of subject labels or traditional structural arrangements. He thought this to be a positive indicator of success but the negative aspect was that the development of a new way of viewing the curriculum created a schism within the school, which he believed may have already existed prior to his arrival.

He concluded that the program had been introduced at a difficult time. The school was facing a declining student enrolment, with a consequent decline in resources, yet

the first grade seven group were the last of the large student intakes. There were seven classes which, Tom described as, an odd number for administrative purposes. It meant that there was more to manage, a complex team arrangement to organize, with the difficulty of a class group being the “odd one out.” To simplify the organizational structure it was suggested that the team would volunteer to take slightly larger classes yet maintain the existing staffing allocation. He explained that what he was trying to achieve, by including himself in the team, was to actually have six classes and eight full-time teachers. However, that proposal met with resistance as the school’s administrators were concerned with the actual number of students in each class group. The management team wanted to keep the groups as small as possible for class size appeared to be one of the criteria valued by parents when selecting an appropriate high school for their children.

Tom was disappointed that he had to constantly argue in support of the program as he knew that some of the school’s management team strongly supported it, but he said that he was “never sure of the position held by some others.” He noted that during his first two years at the school, there were three principals, one a permanent appointment and two acting positions, which he described as “really a recipe for disaster which was actually quite exhilarating in an odd sort of way.”

He noted that in his conversations with team members, they commonly mentioned that they found the program difficult and challenging, that they were upset at various times, but that they actually enjoyed what they did, almost universally describing a feeling of tiredness towards the end of the first year. They had not lost their belief in middle schooling, but they had become weary of trying to promote the scheme and work at it at the same time. One pair of teachers had assured him that they had not “given up”, but had retreated back to their classrooms, worked with their students, supported the other team members but did not participate in the general school discussion about whether the program should continue or not.

Tom would have preferred to have been involved in the original debate about the merits of a middle school program but stated that had not been possible as the appointment to the school only occurred the preceding year, so, in some respects, he felt that he was, possibly, not the most appropriate choice for a leadership role in this

program. He did believe, however, that it was his previous experience in this area, all be it on a smaller scale and in a different setting that prompted the school's administrators to make that choice. He formed the impression that the school's managers assumed that there was a definitive model of middle schooling, a "one size fits all" solution that could be easily applied; whereas he considered that it would have been better to delay the program for one year until the principalship had been resolved and advantage could have been made of the decreased student enrolment. Tom observed that the following year group had been more successful, able to consolidate what the first team had achieved by having a smaller and more manageable administrative structure to deal with. He suggested that implementing the program with the final large year group, nearly one third of the student body, had resulted in a disproportionate impact on the overall school teaching program.

He felt that the team would have appreciated it if occasionally somebody at the top had just said that we were doing pretty well, but mentioned it did not happen very often with other programs either. He believed that the teachers involved in other initiatives felt the same way. He observed what he had generally found in his teaching career. This is if one was succeeding then one tended to be left to one's own devices; what he described as, "a vote of confidence". Tom stated that most school principals, in his experience, had taken this approach. There had been private comments about good progress, but he felt that it would have been a "real morale boost if perhaps some special acknowledgement had been made of the team's efforts". He noted that he had tried to give acknowledgement in his role as grade coordinator but felt that some sort of public recognition from the principal would have been more influential.

Ideally, Tom would have liked the initial program to have worked well enough for the initiative to have been taken through into grade eight the following year, with the possibility of combining classes with the next grade seven. He was still interested in developing a cross-grade curriculum model but thought that there was a high level of antipathy to even the most basic program by the end of the first year. At this point that any radical curriculum reform would have been out of the question, and it would have been too controversial. He believed that the acting-principal was apprehensive about the program even in its original form. To propose a more experimental model at this time would have been seen as an unreasonable suggestion. To create a

learning environment where students could join a range of classes to suit their individual strengths and interests, he believed that they should have doubled the options that were available, with a cohort of two or three hundred students. Tom suggested that the school had lost a unique opportunity to create its own model of middle schooling, which would have met its particular needs. However, he explained, before those ideas could be developed they were overtaken by yet another initiative. The proposal was that the school specialize as a provider of secondary education for overseas students, particularly those from Asian countries.

The school had been enrolling a growing number of overseas students and decided that its educational ‘niche’ would be international schooling. This meant that a lot of resources were re-allocated to that program, and it was not long before the school’s logo had ‘The International School’ appended to it. He felt that the school was already in a good position to establish a reputation for providing an exemplary middle school program but the decision to fund other options, negatively impacted its development. Furthermore, he believed that the interest in providing a program for international students had resulted in a new conservatism in terms of the structure of the curriculum. Tom described how various educators from other countries were impressed with what they saw in the middle school classrooms. However, they had found it difficult to understand what they were actually seeing. He recalled a large delegation of Asian educators visiting his class in an Art room to observe what normally would have been a Science period, but might best be described as a Humanities lesson. He described how the students were actively engaged on various activities related to a unit of work on Science Fact-Science Fiction writing. The visitors were impressed with the level of engagement exhibited by the students, however, when he tried to explain, through the interpreter, to the school principals and education officials what was happening, they found it very difficult to understand. He found it odd that a productive middle school was not seen as an asset that would particularly attract overseas students. There was an assumption that they would be seeking a more traditional form of a ‘western’ education with its subject-based structure.

Tom acknowledged that the tension between the faculty based organization and the middle school had not been satisfactorily resolved. He described conversations with subject leaders who wanted to know exactly what the students were doing, so that

some starting point for grade nine could be determined or, at least, given the reassurance that they had all covered the same sort of work. Some would have worked with the local university on a land-use project; some would have worked with a community group rehabilitating a habitat for Swift Parrots; whilst others would engage on a study of the local water catchment in conjunction with the a scientific research establishment. He recognized that there was a problem in that he could not guarantee the common curriculum content that would have traditionally led into grade nine.

He was aware that the open-ended approach to the middle school curriculum did cause anxiety amongst the teachers in the senior school and some difficulty for the overseas students. It was mentioned that they did have a significant number of international students in their grade seven cohort, and they had made good progress. It took them a while as they sought reassurance from teachers that what they were doing was 'right', as did the local students. The team believed that a key element of the middle school program was to nurture independent learning skills and were quite successful in developing those skills in all of their students. Tom felt that the school "missed the point. To deliver the best of a liberal education in the 'western' tradition, they should have actually been promoting what was being achieved in the middle school, rather than emphasizing the more formal attributes of the senior school curriculum."

Tom stated that there was never a decision to stop the program, that it was more a lack of positive affirmation. It had to do with changes within the school, such as declining enrolments, staff losses, and the appointment of a new permanent principal, who was familiar with middle schooling but had a totally different perception of what it was. He said that the new principal never really saw or understood just how much the students had achieved in their first year. The principal did not quite "get it". Therefore, when the next grade seven started, with a much reduced group of students, there was not so much support. Although the actual teachers involved were still really enthusiastic. Tom believed that those teachers had produced an excellent grade seven program for their students. In some respects, others envied them, as they were able to develop some of the ideas that the original team never did manage to

implement. Towards the end of the year, these teachers were a little bit tired of trying to both implement a program and promote it at the same time.

He thought that at some point, as a teacher, one forgets the promotional aspects of a program and concentrates on the direct task with the students which invariably results in a diminishing public profile. Tom noted that even before the end of the second year, some of the classes had lost their 'core' teacher, as a result staffing difficulties that could have been resolved in other ways, but was not. As a result, within a relatively short time, the curriculum began to resemble the conservative type of organization that the middle school program had been trying to move away from. Tom believed that it was still there, in the psyche of the participating teachers. It was somewhat like "Dracula asleep in his coffin, a little drop of blood would have revived it." There were fifteen or sixteen staff members who had been working in middle schooling and were still enthusiastic about it. He noted that none of those teachers were transferred to other schools, as a result of the declining student population. They were given new assignments within the school and had taken their experience with them, notions of negotiation, risk-taking, or the view that a 'subject' is just an arbitrary label for timetabling purposes. One of the teachers became the head of the Mathematics subject area. The result was that the Mathematics program took on a very different focus from its traditionally rigid, organizational structure. Tom stated his belief "In some respects, the philosophical underpinnings of the middle school program did not disappear; they just became dispersed throughout the whole school curriculum."

Tom was once asked how he would know whether the middle school program had succeeded or not. He could not really think of a satisfactory answer at the time but had jokingly said "It would be successful if the grade seven group proceed to grade nine and no longer passively accept tasks that have little value or personal relevance. The more he had thought about it, the more he believed that this might, in fact, be an indicator of having successfully developed a culture of independent learning in students. He said that this had actually happened, because there were a number of 'top' students who had been uncooperative in class, complaining that the work was not interesting enough and had been done before in grade seven. However, those students who had been a 'problem' in grade seven and eight had long since settled

down and were quite cooperative. He noted, “I was quite pleased in an ironic sort of way.”

Tom stated that there was nothing that he would have changed regarding his own experience with the implementation of the middle school program. This response was not a case of avoiding a difficult question. He had given it a lot of careful thought and given the circumstances, for the cohort of students and teachers, it was the best thing that ever happened. For him, personally and professionally, it was the highlight of his teaching career. He believed that his colleagues shared the same feelings plus, having developed strong relationships with the students, would not have changed it in any way. Tom said, “Students were just so motivated and liked school so much. They valued the experience and wanted to be there. I would have not changed that for anything.”

Tom’s Story: Some Reflections

Tom’s story appears to raise some specific issues related to the middle school program that was the focus of this study and identifies some broader questions that may need to be addressed when implementing school programs. However, Barone (1995) notes that some researchers doubt that personal narrative accounts should be seen as trustworthy because they may record uncorroborated personal experience in a cursory way, “Narrative accounts unaccompanied by scholarly analysis are viewed as incapable of advancing knowledge about educational matters” Barone (1995, p. 245)

To express this reservation, may appear to be odd when I have chosen to use narrative accounts as part of the framework on which to construct my study. However, I believe that it is possible to verify the trustworthiness of a narrative account by comparing it with other personal recollections and reflections of the same events, provided one is confident that there has been no collusion on the part of the participants. Confirming that the observations of the participants are reflected in the findings of academic researchers is also a way of establishing the validity of personal statements.

The stories in this particular study are the product of personal interviews with students and teachers that were conducted during and after the implementation of the middle school program. I discovered, when working on a strategy that might help me identify any commonalities between the stories that, there appeared to be some general themes running through each account. I concluded that these are:

- An element of uncertainty regarding expectations and the commitment of the whole school community and an impression that the middle school team was working in isolation.
- A perception that poorly defined management structures contributed to conflicts over physical resources.
- A belief that the failure to clarify the responsibilities of the existing subject coordinators had impacted on curriculum development and preferred teaching styles.
- A degree of disappointment that the full potential of the program was not fulfilled.
- Recognition of high levels of personal professional development, a positive relationship with students and sense of collegial support between partners and within the middle school team.

Interestingly, yet perhaps predictably, the students made few comments about the issues that were of major concern to the teachers. Yet they, too, stressed the importance of positive personal relationships within the classroom and within the school in general.

I intend to address those themes under the following headings:

- Goals and expectations.
- The management of physical resources.
- Curriculum development.
- Disappointments.
- Teacher satisfaction.

Goals and Expectations

Tom and the other four members of the team who related their experiences, mentioned an element of uncertainty regarding expectations and the commitment of the whole school. There was a lack of clear direction and purpose displayed by the school's managers regarding the anticipated endpoints of the program and how those endpoints would be assessed and monitored. The need to establish clear goals as a prerequisite for successful innovation is well documented by Peterson, Mc Carthy, and Elmore who believe.

Successful relations occur among school structure, teaching practice, and student learning in schools where teachers share a common point of view about their purpose and principle of good practice.

(pp. 147-9)

The team members appeared to have developed clear expectations of what they were trying to achieve in both a social and educational sense. It appeared that their commitment and enthusiasm was a key factor in any successful outcomes that were achieved, but there is a sense of 'going it alone' running through all the stories. van Tulder, van der Vegt and Veenman (1993) stress the importance of a clear commitment by the whole school community if changes are to be successful. They note:

At high effect schools staff were committed to implementing the desired changes and, school leaders gave considerable direction, providing directional pressure, support and coherence.

(pp. 136-142)

Tom mentioned that the middle school team worked cooperatively to establish their own aims and objectives but felt they were given little clear direction from the school's managers who appeared unsure of their goal; whether they were progressing towards developing a middle school in terms of a timetable structure, a social organization, a curriculum model, or a combination of those elements. He also commented that one of the key issues that made resolution of timetable and curriculum problems difficult was the failure to establish a school-wide, commonly recognized, overall purpose for the program.

Tom was in a position to make comparisons with other programs having experience in middle schooling. Interestingly, he appeared to have a more positive view of the outcomes than his colleagues, who lacked previous experience in this field. He also commented on his disappointment with the progress at his previous school noting that there seemed to be an over-emphasis on the technical aspects of the timetable and other administrative details. He thought that this had actually retarded the development of new initiatives in curricula and methodology, because the school believed that it had a viable middle school program. However, it is worth noting that this attitudinal phenomenon has been observed by educational researchers. As Flowers (2002) states

Two of the biggest misconceptions surrounding the implementation of interdisciplinary teaming in the middle grades are that (a) the work is complete after teachers and students have been assigned to teams and the class schedule has been rearranged and (b) the implementation of teaming ensures that a school will positively impact teacher and student outcomes.

However, the truth is that not only is the most challenging work tackled after the teams have been formed, but, without the follow-up work, teaming alone is not likely to achieve sustained outcomes.

(p.1)

Richard noted similar difficulties in his story and thought that the school's administrators should have been committed to a five year plan of implementation for any significant change in the school's culture to occur. Richard recognized that processes needed to be in place early in the year, if the new system was to be operational by the following year and was concerned when by mid-year little progress appeared to have been made. He sensed an element of urgency developing, a 'last minute panic.'

Christine had expected some formal support from the school management but stated that it never eventuated because there was school-wide consensus about what the program was hoping to deliver. She did not apportion blame but felt that there had not been sufficient opportunities for the middle school team members and the school management team to focus on the broader picture. She believed that the middle

school teams were too busy trying to survive and keep their ideals alive on a day-to-day basis. This view was also shared by Lynne who believed that the most significant difficulties were caused because the school had had three different principals during the planning and implementation stages of the program: one who valued it and started the process, then an acting principal who was anxious not to make any controversial decisions, and finally a new principal whose real priorities and values were not known.

It appeared that the reasons for establishing the program were not clearly enunciated. There was not a fundamental clarity of purpose that Linke (1999) identifies as a first step to successfully establishing a middle school program.

Whenever a school enters a change process it should think clearly about perceived benefits and the review and monitoring phase. Even though there is much research about the benefits of middle schooling and these are well documented, it is important to match the theory to the practical issues that arise at any site.

(p.1)

A lack of a common purpose, or, possibly, the lack of an explanation of purpose, put the program at risk from the outset. It exacerbated the problems that developed while the program progressed as there were no benchmarks that might be applied when decisions relating to resources and staffing, inevitably, had to be made.

The Management of Physical Resources

Teachers believed that poorly defined management structures contributed to conflict over the allocation of physical resources. Tom mentioned specifically that the team found it difficult when they had to seek resources from a faculty head who had not been involved in the initial discussions about middle schooling or did not support it. He also noted that he was the only member of the management team with dual responsibilities, representing both the Arts and the middle school. Yet there was no reciprocal arrangement by which the faculty heads were required to attend middle school meetings.

It is hardly surprising that there were difficulties in these circumstances. There were two cultures trying to co-exist, the traditional culture of formal subject oriented departments and the newer culture of middle schooling, with its emphasis on integrated learning and flexible timetabling. It is important to realize that cultures do not exist in a vacuum. They are the product of tradition and location as Tyack and Tobin (1994) have noted:

They are grounded in structures of time and space. These structures shape relationships. Structures of teacher isolation have their roots in schools that have been organized like egg crates since the mid-19th century: schools in which children are moved in batches through prescribed curriculums, from grade to grade, teacher to teacher. Similarly, balkanized teacher cultures are often the product of subject department structures based on the university-oriented system of Carnegie units, devised in the United States in the 1920's.

(pp. 453-459)

It is interesting to note that the authors make specific reference to 'balkanization' as a form of culture. For the teachers in their stories, universally mention a 'them and us' situation within the school. Hargreaves (1994) has described 'balkanization' in an educational sense, as a phenomenon which leads teachers to aggregate in small subgroups that are in conflict over issues relating to the curriculum and the provision of physical resources. This fragmentation is noted by the team members as a major obstacle in terms of resources and staffing arrangements. For example, Tom explained that his proposal for reducing teaching group size (Whereby, the team would volunteer to take slightly larger classes but maintain the staffing allocation by having six home groups for administrative purposes and eight full time staff for teaching purposes) was resisted by the school's administrators, who were more concerned with the actual number of students in each class group.

However, we must be careful not to attribute too many difficulties to this clash of cultures. Watts (1999) cautions, balkanization can take many forms and may not be a phenomenon restricted to more conservative styles of organization. She suggests.

The teacher's loyalties are to a subgroup, not the school as a whole. People in the subgroups don't have much to do with people from other groups. When they are forced to do something across groups, like developing a school plan, then they fight. We use this description

not only for sub groups who are against change, but also for subgroups of innovators. Are they wittingly or unwittingly doing things that seal themselves off from other parts of the school?

(p.10)

Whether, or not, the middle school team members were isolating themselves from the mainstream organization of the school there was a clearly defined concern about the struggle for physical and financial resources evident in all of the teachers' accounts. Tom felt that even at the beginning of the program, there was conflict looming between the teachers in the grade seven team and some of the other staff. He believed it was a result of the ongoing difficulties with teacher allocations and a perception that the middle school staff were being offered a disproportionate amount of development opportunities. He also noted that he felt that by the second half of the first year, there were moves by other staff, particularly some subject heads, to limit the grade seven program. They saw the middle school initiative as the cause of their own problems, with the timetabling and budget resources.

Christine recognized, from the outset, there were going to be problems with some members of staff and difficulties with time-tabling and resources. However, she stated that she had underestimated the degree of resistance. Christine believed that schools were bureaucratic organizations and some of the difficulty experienced by the middle school team resulted from the friction between progressive and traditional forms. Whilst careful restructuring and the redefining of roles and responsibilities may not guarantee successful innovation, poorly defined management structures will be an impediment to smooth progress. The work of van Tulder, van der Vegt and Veenman (1993) confirms this, they observed that

In high effect schools tasks were reassigned and power and influence relations were redefined, and careful definitions of latitude in using the innovation were provided. (pp. 136-142)

It is interesting to note that Christine had not volunteered her services to the middle school team, although she had taken an interest in the proposal. In the circumstances, it would be fair to accept her comments as being those of an impartial observer, confirming the comments of the other team members.

Lynne also mentioned the organizational difficulties that led to competition over resources and described how there were certain problems with the timetable that

were not resolved. Particularly, the plan to give the students some ‘negotiated time’ where they could follow programs of their own choice

Curriculum Development

The members of the middle school team spoke at some length about curriculum issues. They noted, in particular, their belief that the tension between the subject coordinators and the team members had restricted the full development of a new middle school curriculum, and had impacted on their preferred pedagogical style. Tom stated that the uncertainty of the organizational arrangements did generate extra work for the team and stated that they often had to duplicate work, such as producing a formal traditional report for the subject faculty and a more generalized statement for themselves, students and parents. Despite the middle school philosophy of developing teaching programs that did not fit into traditional subject ‘boxes’, he believed that an additional element had been added to the existing subject-department oriented management structure of the school without clarifying curriculum responsibilities. This resulted in a degree of uncertainty about the relationship between the middle school teachers and the heads of the traditional subject areas. He thought that, ultimately, the ambiguity surrounding curriculum responsibility created a schism within the school, although he believed that this tension may have already existed before the implementation of the middle school program.

The conflict over curriculum ownership stands out as the most significant issue in all the teachers’ stories. This is hardly surprising as the way we define curriculum is strongly influenced by our individual construction of its meaning. Personal definitions are varied and fluid, ranging from what is taught in a specific classroom on a day-to-day basis to a description of systems for dealing with the organization of personnel. Without clearly stated parameters, difficulties are bound to arise when models from either end of this spectrum have to co-exist. The Australian Curriculum Association (1990) guidelines for effective curriculum reform specifically identify this as an issue.

Curriculum is a social, historical and material construction which typically serves the interests of particular social groups at the expense of others, accordingly curriculum work should be a collaborative experience among all curriculum workers and system and institutional staff. It should involve collective critical reflection by all participants in order to refine curriculum practice, social organization and discourse. It requires the provision of appropriate resources (especially to engage previously uninvolved groups) to ensure authentic participation.

(p.32)

Tom mentioned, in some detail, his aspiration to develop a new type of curriculum. It was his goal that the program would continue into grade eight the following year, with the possibility of combining classes with the next grade seven. The middle school teachers were interested in developing a cross-grade curriculum model. However, they believed that there was such a level of uncertainty about even the most basic program that any radical reform would have been out of the question, as it would have been too controversial.

Tom's story was confirmed by the other accounts. Richard sensed a tension developing between the school's timetable administrators and the assistant principal responsible for the development of the new program. Richard identified a growing realization by some faculty heads that there would be problems with the staffing of a number of senior classes because some of their teachers had expressed an interest in working in the middle school. There was a reluctance to remove, what he saw as, their more experienced staff from the grade nine and grade ten classes to allow them to work in the middle school and saw the program as a disruption to their existing learning programs. Whilst, Christine mentioned that she felt uncomfortable when the Learning Area Managers visited her classroom, because she felt their primary objective was to ensure that their particular subject was being taught 'properly', or rather, the same way that it always had been.

Lynne's observations appear to have mirrored these findings. She described how in the grade seven team, the Humanities and Mathematics and Science teachers were developing an understanding of each other's subject area, as well as developing skills in other fields such as, Art, Materials Design and Technology, or Physical Education. She saw this as the most positive outcome of the program. She compared this

integrated approach to teaching with the senior school where most of the faculty heads exclusively taught the grade nine and ten students in subject-based groupings.

The stories suggest that there were two competing cultures within the school and a miss-match between those cultures and the overall administrative organization. There was clearly a tension between two different models of curriculum and two different types of organizational structure which might have been resolved when staffing arrangements were being organized. Tom looking at a solution, suggests that one other faculty leader should have been included on the team and recommended that person be from one of the more conservative subject departments. Watts (1999) reminds us of the effectiveness of this type of strategy.

A key component of reculturing is the willful involvement of critics and skeptics, who might initially make change efforts more difficult. We must recognize that diverse expertise contributes to learning, problem solving and critical inquiry. (p. 8)

Susan, however, mentions a specific problem. She wanted to look at “big issues”, things that would make the students aware of what the world was really like. Questions that would make students think about their own place in the world. She believed that it was unimportant whether issues were approached from a Science perspective provided that they were addressed. She sensed some resistance from her colleagues in the Science faculty whom, she believed, would consider this to be compromising the position of the subject within the school organization.

However, one must be cautious when suggesting that appropriate, clearly defined, structural arrangements might be the determining factor in the effectiveness, or otherwise, of curriculum reform. For this implies a systems based top-down model of curriculum improvement, which in my experience, as a practicing teacher and one-time curriculum consultant, is rarely successful.

It is ultimately a question of whether an individual teacher decides to support the reform through their actions on a daily basis within their own classroom and in support of their colleagues or not. In this respect, I feel that although the teachers’ stories reflected a sense of frustration with the tension over ownership of the curriculum, they also indicated that they were successfully developing new programs

within their own classrooms and the middle school team. A study by Peterson, Mc Carthy and Elmore (1996) tends to confirm this view.

Teaching and learning occur mainly as a function of teachers' beliefs, understandings, and behaviors in the context of specific problems in the classroom.

Changing practice is primarily a problem of learning, not a problem of organization.

School structures can provide opportunities for the learning of new teaching practices and new strategies for student learning, but structures, by themselves do not cause learning to occur.

(pp. 147-9)

There may, indeed, be an argument that too much emphasis on the structural arrangements for the delivery of the curriculum might actually interfere with its implementation. A teacher's capacity to respond to changing needs and circumstances could be restricted to the extent that the curriculum no longer reflects the needs of particular students in specific classrooms. The Australian Curriculum Studies Association (1990) guidelines point to this possibility.

Curriculum realization creates quite different experiences for different individuals. Therefore, the specification and standardization of curriculum provides no guarantee of uniformity or quality of experience. The explicit and implicit function of curriculum realization (including the hidden message of the institutional context) may turn out to be quite contrary to the aspirations expressed for the curriculum

(p.32)

Disappointments.

Tom expressed some disappointment that his expectations for the program were not met; particularly, his plan to develop some cross-grade courses, and his constant arguing in support of the program despite knowing that some of the school's management team strongly supported it. He recognized that a cultural change of this magnitude, in a conservative school, was going to be difficult. Although disappointed that all the goals were not achieved, he acknowledged that some significant progress had been made. He seemed to understand that the difficulty

associated with the implementation of a change is likely to be related to the degree of difficulty of that change. Fullan (1995) has also suggested:

Change will be more effective if it is recognized that it is a complex process and while simple changes may be more easily implemented the resulting change is often small but with more complex reforms a more noticeable change is likely to result. These complex changes however require more effort and may result in a greater feeling of failure.

(p. 105-107)

Overall, however, Tom and Susan appeared to have a more positive view of their achievements than the other team members.

Richard was particularly disappointed that the school lost the opportunity to demonstrate that it had vision and a capacity to successfully implement that vision. He felt that the school could have developed a reputation for the excellence of its middle school program. Richard believed that all the team members had made a determined effort to succeed but lost some enthusiasm when they perceived that the initiative was being undermined. He stated that the amount of effort required to support the program became too hard and a feeling of disenchantment started to develop. In particular, he was personally disappointed that the attempts to implement the 'negotiated time' option were not successful.

Christine regretted that there was not the high level of support from the school's management team that she had expected. She had anticipated that the managers would have had a more active involvement in the program and a higher profile in the middle school area. Fullan (1995), however, concludes

Effective change takes time and that a lack of implementation does not necessarily mean that there is strong resistance to change. A number of possible reasons could exist such as inadequate resources to support implementation or insufficient time has elapsed.

(pp. 105-107)

Lynne mentioned her concern about a lack of an in-school or independent assessment and evaluation of the program. She knew, from experience, that the students' academic progress and their relationships with their peers and staff had improved.

Yet there was no capacity to confirm it in any formal way. She also felt that this lack of formal evaluation made it difficult to promote the successes of the program or to identify any shortcomings, so that strategies for addressing them might be developed for the future. Lynne would have preferred the program to have continued with some improvements, rather than declining to the point of past practices.

The lack of an evaluation program as an integral part of school-based educational reform program is unfortunately the 'rule' rather than the exception. Linke (1999), however, identifies this as a critical factor for the successful implementation of change at the school level observing:

There is much evidence to show that schools only get through the first phases of the process and then things fall flat as demands change and other priorities present themselves. For the change process to be complete schools must get to the review stage so that they gain knowledge about the effects of their change. This knowledge is then a useful part of experience that will be transferable to other groups and situations.

(p. 2)

In my experience, top-down or systemic changes, usually the least successful change agencies, generally recognize this phase. Whilst, at a local level, where change is often successfully achieved, some type of review is often planned yet rarely undertaken in a professional manner.

Teacher Satisfaction.

The level of personal satisfaction with the outcome of a particular educational program, like ones' view of what might constitute a curriculum, is probably going to be determined by the individual's own expectations for that program. It might be argued that the higher ones' level of expectation the greater the disappointment' if those expectations are not met. But the positive interpretation of events by Susan and Tom would seem to dispute that. Both appeared to have had high expectations of what might be achieved, yet still point to personal successes, despite the difficulties that were encountered in the implementation of the program. However, it is possibly more complex than that.

Mc Beath (1997) draws our attention to the reality:

Smooth and successful curriculum change is enormously difficult and time consuming and cannot be accomplished without potential implementers becoming personally involved and accepting the change on their own terms, according to their own constructs of reality.

(p.1)

It is interesting to observe, despite the structural problems, curriculum conflict and disappointments noted by the team members, all individuals mention experiencing high levels of personal professional development. They specifically stressed the positive relationships with their students and the sense of collegial support between partners and colleagues. Tom stated that he had anticipated difficulties yet believed, in general, the first year of implementation had been a qualified success. Despite significant difficulties and a lack of universal support, he believed that the middle school team, ironically, made more progress than had been achieved in his previous appointment. Tom suggested that a major cultural shift had been achieved in the new school. Now teachers in the middle school team would not have described their activities and priorities in terms of subject labels or traditional structural arrangements, and he thought this to be a positive indicator of success. He mentioned in conversations with team members, they often spoke of the difficulties and challenges, but stated that they actually enjoyed what they were doing. The team believed that it was important to nurture independent learning skills and thought that they had been successful in developing those skills in all of their students. Tom also stated, personally and professionally, that it was the highlight of his career. He felt it was an experience that he would not have changed for himself. He believed that his colleagues shared the same feelings. It is worth noting that the majority of the team members would have described themselves as 'older' teachers, which may account for the relatively high levels of personal satisfaction given the difficulties and constraints that were encountered. In a study to determine levels of teacher satisfaction, Sinclair (1992), discovered that age was a determining factor to be considered when assessing levels of teacher satisfaction. He concluded:

Teachers aged 25-34 were the least satisfied. Older teachers' expectations were higher than their younger colleagues, but their actual satisfaction was also higher. And that job satisfaction was found to be more significantly related to teacher needs. Areas of high satisfaction included seeing student growth, having an influence on students and having positive teacher/student interactions.

(p.3)

Interestingly, in the same study, it was found that gender was not a significant factor.

Richard described a sense of starting on a new venture with the teachers working well together and full of enthusiasm. With the participants being sufficiently motivated with such a strong belief in how the program should operate, it allowed them to get through the uncertain months at the start of the year, and their enthusiasm motivated them to implement some effective programs. He believed that the students had adapted well to the program, were socially responsible, and that the first set of reports indicated that excellent progress had been made. Richard mentioned the overwhelmingly positive comments from parents (particularly in the first interview sessions after the release of reports) and noted the few discipline problems at that stage. He believed that he had developed a positive relationship with his class and his partner. Christine, his partner, confirmed this, noting that she related well to her students, her partner and other members of the team. For Christine, who had been instructed to work in the middle school, it had been a positive experience.

Richard identifies the strength of this relationship as the critical element that contributed to the program's success. Wallace and Loudon (1994) also identified these factors.

The preconditions for success in any program are to be found, not in the qualities of the program, but in the qualities of the collaboration.

Personal qualities, underscored by mutual trust and respect, form the basis for successful relationships in teaching.

For teachers and students alike, learning is a risky business that is most likely to take place in a safe environment.

(pp. 332-3)

Lynne stated that she enjoyed the experience of working with her partner because they could really ‘spark off’ one another and achieve great things. She also believed that she had established a close relationship with her students and that the particular cohort of students was not different from any other grade group, with a wide range of academic abilities and some serious social problems. She described them as being one of the most settled grades that she had experienced working with and saw this as an indicator of the program’s positive features. Susan also commented positively that there was the opportunity to team-up with a colleague to develop ideas for joint projects that would be planned, resourced and implemented together. She believed that her class program had been highly successful but had been prepared to review it, change some things and generally learned a lot from the experience. Susan explained that the whole point of her curriculum was that it should be real, rather than a contrived form of integration. She expressed confidence that her program had been realistic and offered opportunities for authentic learning.

Susan and Lynne were particularly positive in their comments about the strong relationships that had developed within their classrooms, between themselves and the team as a whole. It would appear that if these elements are positively developed then the constraints imposed by inadequate resource allocation, physical working conditions and organizational problems can be, somewhat alleviated. It is as if the difficulty of the task is determined more by the relationships that are developed between the participants than by the level of physical resources that are allocated to that task.

The strength of the personal relationships offers an explanation for the apparent contradiction within the five themes that have been found in Tom’s story and in the stories of the other team members. Of the five themes, three were seen as negative factors, one was a disappointment and only one, related to professional satisfaction, a positive. However, the teachers’ stories express personal satisfaction with the outcome for their students and themselves. The significance of personal satisfaction is confirmed by the Hawke (1999) study into the quality of teachers' lives which focused on the following issues:

- The nature of the working relationship between teacher and principal.

- The level of support received from the parent of their students.
- The nature of the policies produced by the education system in which they work.
- The extent to which their work influences their students' future lives.
- The industrial conditions which relate to their employment.
- The opportunities available at the school to influence decision-making in educational matters.
- The nature of their working relationship with their colleagues.
- The personnel structures which apply to the education system.
- The capacity to exercise control over the effects that changes in education may have on their work as a teacher.
- The extent of the opportunities available to pursue involvement in matters related to their professional interest.
- The quality of the facilities and other resources available to the teacher at their work.
- The nature of the curricula which govern the content of their work with students.
- The amount of effort necessary for teachers to meet all requirements of their work.

- Finally, the public perception of teachers as expressed in the wider community.

It was found that the participants expressed some degree of satisfaction with seven of the elements surveyed, and of those, the three most important for teachers were;

- Positive relationships with colleagues,
- Positive interactions with students,
- A desire that their work should have a positive influence on students' future lives.

(pp. 5-11)

A Pause for Reflection.

Can we, therefore, determine whether Tom's story is phenomenologically trustworthy and whether the observations made within it have also been made by other researchers?

I would suggest that it is trustworthy in the sense it is illustrative of the types of difficulties that might be associated with reform in educational contexts. The story's overall themes are mirrored in the stories of the other teachers who participated in the study. Also the themes are reflected in the research findings of Hargreaves (1994), Miller (1999), Peterson, McCarthy & Elmore(1996), Sinclair (1992), Staessens (1993), van Tulder, van der Vegt, and Veenman (1993), Wallace and Loudon (1994), Wubbels (1993), and others.

It is clear that the issues revealed in the story have been identified by other educational researchers. In some respects, there are no 'new' discoveries. However, that possibly enhances, rather than detracts, from the trustworthiness of Tom's narrative. Mc Beath (1997) makes the comment, when writing about the recent history of educational research

(A)ll of this has a common theme, that curriculum change is a complex and difficult process and requires careful planning, adequate time, funding and support and opportunities for teacher involvement." (p.1)

It might be suggested, therefore, that a story which did not touch on these issues might, perhaps, be seen to be less than reliable.

Chapter Six.

The Journal.

Introduction.

This chapter attempts to push of reflective practice further into unfamiliar territory. The voice of the author (journal notes), the voice of the commentator (the ‘problematics’) and the voices of the educational research community (the supporting evidence) are presented in parallel. (This is still not quite a surreal model of writing educational research, but about as far as I can go within the confines of the thesis).

If I were to review the metaphorical hologram used to describe the structure of this thesis, I would consider this chapter to be the fourth lens. It would be the one that may create the illusion that the observer is viewing a solid object. The preceding chapters might be seen as the three foundation colors; the cyan, the magenta and the yellow, that when combined form a multi-hued, but still flat, image. The review, analysis and re-interpretation of the journal notes might provide some elements of depth and detail that may add a three-dimensional quality to the work.

I am particularly interested in the way Peshkin (2000) uses, what he terms, ‘problematics’, a form of meta-narrative reflection, as a means of applying an element of rigor into, what might be viewed as unverifiable personal narratives. He explains his strategy in the following terms

The journey and the problematics are complementary strands, together showing what underlies the researcher’s process of interpretation, with its numerous occasions for interpolating and extrapolating, judgment-making and assuming, doubting and affirming

(p.5)

He effectively weaves the complementary strands together to achieve what appears to be a seamless commentary on the narrative as it progresses. The use of italic print allows the reader to enter into this conversation thus.

At this time, I knew little more than that Pueblo Indians were people of two worlds, meaning that they were somehow involved in an Indian and a non-Indian world. What is it like to live in two worlds? I wondered. What does this mean? How is it done?

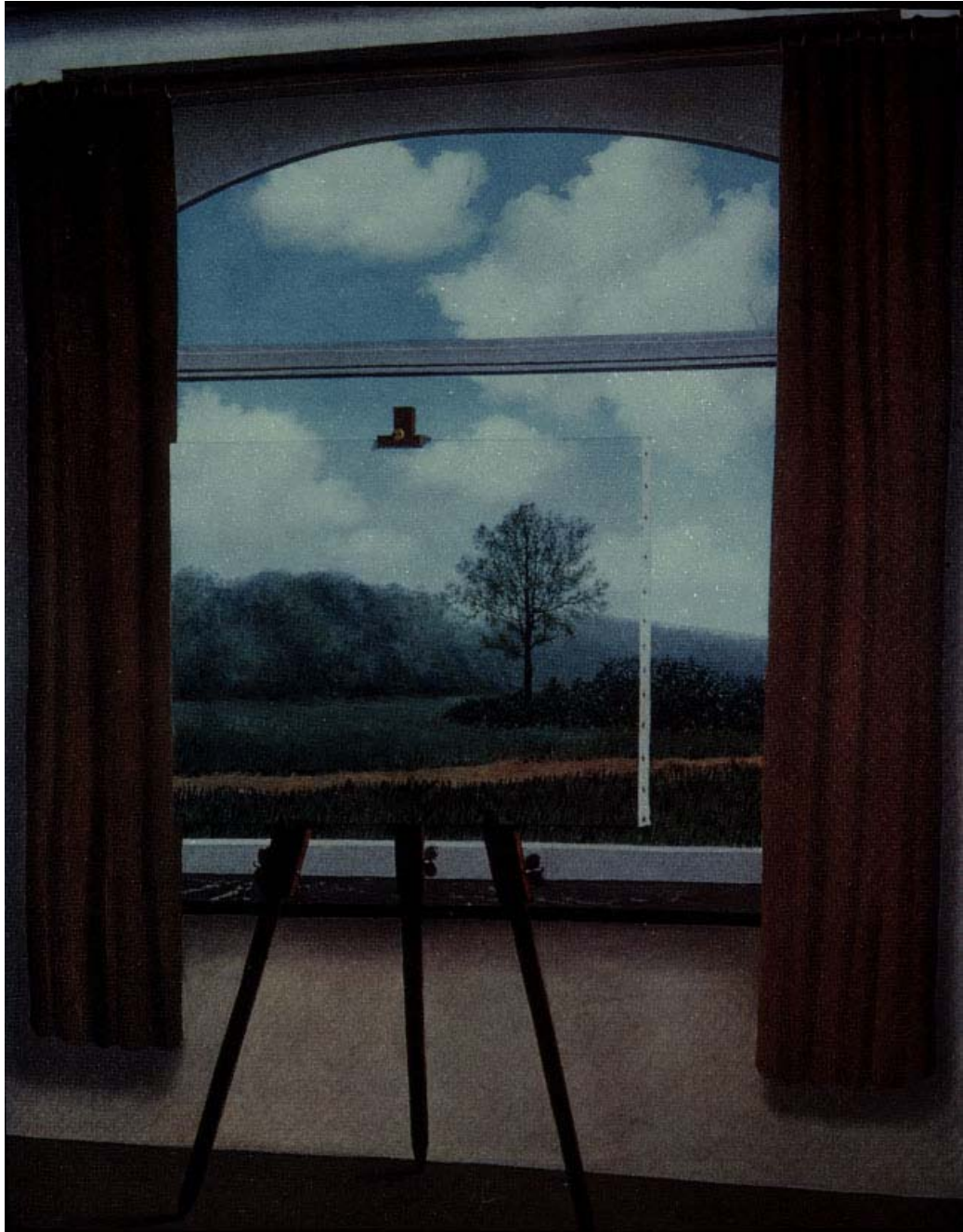
PROBLEMATICS: I was determined to study the phenomenon of dual identity. Had I thought that Indians ought to live in two worlds, or that they should do so in a certain way. I would have known that I began the shaping of my forthcoming interpretations with a particular state of mind and its particular implications. ... We are not indifferent to the subject matter of our inquiries.

(p.5)

It is my intention to model this chapter on Peshkin's "problematics", particularly the use of italic print, to provide a means by which I may reflect on the journal notes. I see his approach as an attempt to go beyond the surface meaning of a text, to see a picture within a picture, to discover hidden details and, through reflection, determine the significance of those details. For me, Peshkin's writing contains echoes of the painting "The Human Condition 1" (overleaf). This is a work in which the content is abundantly clear, yet the interpretation of that content is far more complex. In some respects, Peshkin's explanation of his method of interpretation appears to be reflected in Magritte's commentary on the work.

I placed in front of a window, seen from inside a room, a painting representing exactly that part of the landscape which was hidden from view by the painting. Therefore, the tree represented in the painting, hid from view the tree situated behind it outside the room. It existed for the spectator, as it were, simultaneously in his mind, as both inside the room in the painting, and outside in the real landscape.

View, 7, 2. 1946. In Schneede (p.108)



Rene Magritte. "*The Human Condition I.*" 1934.
Oil on canvas. 105 x 80 cms. Private collection.

Utilizing Peshkin's "problematics" may provide a strategy which might allow the obvious landscape of the journal entries to be viewed. Yet, at the same time, allow a glimpse of the landscape that is hidden.

The Journal Entries.

One of the first tasks that we were given at a professional development session, as the newly formed middle school team, was to draw a cartoon in the attractive hard-bound journal that we had been given. The idea was to try to develop a personal metaphor to explain why we had elected to become involved in the program and then to develop a group metaphor to illustrate our hopes for the new program. I tried to depict the moment, in an interview with my superior officer, when I tried to explain that I no longer wished to continue in my current career and was planning to enroll as a mature-aged student in a Teacher Training College. Basically, the more he complimented me on my performance the more determined I was to leave. At some point, he had said something along the lines of being good enough at my job to take over his role in a relatively short time. At that moment the decision was made, and I handed in my formal resignation. I am not sure, to this day, why I chose that particular incident but I think it was about intuitively knowing that the time is right for certain courses of action. I certainly felt that about the opportunity to become involved in the development of a middle school program in what was a fairly conservative suburban high school. I could not clearly rationalize my decision to leave my earlier career or exactly explain what I saw as the advantages of providing a specific educational program for young adolescents. Yet I knew they were the right choices. Interestingly, Hesthusius and Ballard (1996) note:

For many of us, there are moments in our professional development, as in the whole of life, when we know that we no longer believe in what we had long accepted as true and correct. Something no longer feels right: it is a feeling that arises in our deeper psyche, in our somatic-emotional life.

(p. 1)

The metaphor that we developed as a team had something to do with dolphins, creatures that were sociable and communicative, were able to steer ships away from

danger and possibly rescue drowning sailors but could defend themselves quite effectively when threatened.

I maintained the journal during and after the program's implementation phase, and, still keep one. Although I am now about to start my third hard-bound book, I have clearly needed to be selective in the choice of the particular journal notes that I intend to discuss, but have attempted to ensure that they included a range of entries indicative of the day-to-day issues which arose during the initial implementation phase of the middle school program. My journal consisted of meeting-notes, quotations, drawings and numerous memos to myself and others. The entries appeared to fall into three broad categories.

- Organizational.
- Personal.
- Curricular.

As one would expect, in an educational setting, none are mutually exclusive. The memos, too, tend to reflect those categories, and, although temporary in nature, have proven to be a particularly useful source of material. Maxwell (1996) points out the significance of memo writing.

Memos are one of the important techniques to develop your own ideas. You should think of memos as a way to help you understand your topic, setting or study.

(p.12)

Organizational Issues.

Journal Entry 1: The first professional development meeting organized and facilitated by the Principal Curriculum Officer for Science Education.

This is our first meeting as a team, so we are a little apprehensive, not quite knowing what to expect. Although most of us had already worked together in some capacity we had not discussed very much beyond the 'mechanics' of which actual classroom each teacher would have and which particular students would be in which particular

class. I think that, for most of us, our immediate priority was to work together on the development of some lesson plans for the first few weeks of term and ensure that adequate physical resources were in place to allow the team to operate effectively. We had all anticipated that our time would be spent doing just that, so were surprised when the first activity was a group exercise to determine what sort of metaphor might best describe what we were hoping to achieve by involving ourselves in the middle school program.

A number of the group were, initially, a little concerned that this might be a waste of valuable of time, with other urgent issues to address. However, as we immersed ourselves in the task, it became clear that this was a very useful strategy which encouraged a meaningful dialogue about our broader educational values and purposes. Initially, we toyed with the idea that the school was somewhat like the Titanic, blissfully sailing along, the crew unaware of the iceberg in its path. But, on reflection, we felt that the fact that we were actually at the meeting, discussing improvements to the curriculum, meant that the iceberg had already been sighted by a few individuals who were mindful of the dangers ahead. The discussion, I suppose inevitably centered around, ‘steering’ and ‘piloting’ ships out of danger but did not seem to resonate well with us; for we felt that although we were ‘of’ the ship, with its best interests at heart, we were not necessarily ‘on’ the ship.

Somebody, at some point, mentioned dolphins, an image that immediately seemed to meet with universal approval. We liked the fact that they were intelligent, sociable creatures, who could guide mariners away from danger. Yet, when threatened, they were quite capable of cooperating with one another to damage the largest of sharks so severely they lost their internal balancing systems and drowned.

The first session put us in a positive frame of mind and we capitalized on that by developing some broad parameters for our program. We tried to envision and describe what the middle school might actually look like, social and educational goals we were hoping to achieve, and criteria we might use to determine whether we were successful. We recognized that there would be a need for flexibility, if we were to take full advantage of the new circumstances. Doing ‘more of the same’ would not be acceptable. We acknowledged that there would be limitations to what we could

achieve in the first instance. We determined that we would endeavor to work towards developing our own style of middle school program, rather than measuring ourselves against practice in other schools. We believed that our curriculum should not be fixed, but rather emerge from the relationships that we would develop with our students and from a focus on their prior knowledge and personal interests. This would not preclude us from designing an exemplar for a model grade-seven curriculum, it would just be different from the conventional subject-based program of work which was often designed before the individual students had actually enrolled in the school and based on a generic grade-seven program.

In our draft statement of purpose, we referred to our aspiration to work as a collegial team with the notion of ‘participatory inquiry’ underpinning our approach to curriculum development. We would transform our own practice through a clearly articulated pedagogical and educational philosophy. Our programs would be negotiated with clear learning intentions and reflect the lived experience of our students.

The meeting was particularly successful with Richard noting that he had been concerned that it was going to be “yet another talk fest” but was pleased that the day had been so positive. Christine, however, did express some concern that Barbara, the assistant principal responsible for the middle school program, had not been able to attend and that it would now be difficult for her to fully understand “where the team was coming from.”

I am certain that our focus on initially building a positive middle school environment, rather than a set of curriculum plans, was the most effective way to develop the program. Interestingly, there is some research that confirms our conclusion that the specific detail of the curriculum may not be as significant as we had traditionally thought. Wubbels (1993) and Fraser (1994) noted the importance of positive classroom environments during the transition to high school rather than the actual subject matter that is taught.

Some team members remained a little concerned that the program was to commence, while there were still unresolved issues related to the staffing of classes, the

allocation of resources, and a perceived lack of universal support. However, generally they left the meeting in a positive frame of mind, with a sense of optimism and shared purpose. No one seemed particularly worried that they had not yet planned the first week's lessons in detail. Significantly, the group had been more concerned with ensuring that the underlying philosophy behind our purpose had been clarified, rather than determining exactly what the details of the curriculum might be. I found this to be a major shift in focus from other professional development activities that I had experienced and felt confident that, despite some administrative problems, the program would be successful.

Journal Entry 2: Second professional development meeting.

The first questions were concerned with the basis for our curriculum and with worthwhile ways of relating it to the world and each other. We determined that, rather than having a curriculum made up of a set of unrelated subjects, we would utilize the subjects as the tools for exploring bigger ideas but using the specific subject skills for specific purposes. We felt that “true” knowledge would allow one to transfer the experiences learned in one situation to other situations and other fields of learning. We decided that in order to develop this type of curriculum we would need to collect information from the students and listen to their stories about moments that had been worthwhile to them. We would encourage the students to present these stories in a variety of ways such as written narrative, video production, visual art work, music, poetry, and so on. We felt that one could start the process by simply asking the students to describe the things that they considered to be personally meaningful and worthwhile. Once this had been achieved, we believed that the teacher could then enter a more anticipatory dialogue with the student to determine the types of investigative activities that they might wish to pursue.

We considered that this approach might provide a means of exploring ways to ensure that the students became fully engaged in their own learning and a way to determine the real concerns of young adolescents. The objective was to create an environment in which the students would be able to articulate their own values, or as Bean (2001) puts it

Curriculum integration has long been proposed as a way of organizing the “common learnings” or life skills considered essential for all citizens in a democracy. Curriculum is organized around real-life problems and issues significant to both young people and adults, applying pertinent content and skills from many subject areas or disciplines. The intent is to help students make sense out of their life experiences and learn how to participate in a democracy.

(p.1)

To support our new curriculum we hoped to build some flexibility into the timetable through the use of what was termed ‘negotiated time’ sessions. To ensure that we might cater for individual student needs and maintain workable class sizes, we needed the assistance of two extra teachers, during the six weekly sessions that was allocated to this program. However, the school’s administrators had not been able to meet our request.

We had not been successful in our attempts to resolve the issue and had wasted valuable grade-meeting time complaining about the decision and in circular discussions. Allocating a predetermined amount of time, within the context of an out-of-school professional development day, appeared to be a useful strategy that might enable some progress to be made. As a means of ensuring that effective use was made of that time, the members of two working groups were given specific roles: the owner of the problem, two questioners, a checker, a recorder, a reflector and a timekeeper to keep the participants on track.

The process was demanding both practically and intellectually but yielded some excellent possibilities for further development. It was unfortunate that Barbara was not able to participate in our curriculum discussion and efforts to overcome the organizational difficulties with the ‘negotiated time’ program. Some of the team members were annoyed by her absence, but did develop a positive plan to resolve the issue. However, I feared that it may be too late for her to reconnect with the group in any meaningful way, with any real understanding of what we are trying to achieve. The problem solving session was particularly useful and generated some workable possibilities. We agreed to postpone any grade-wide implementation of the ‘negotiated time’ program until the staffing issue was resolved. However, in the

interim, the teachers wanted to start developing their own programs with their partners, “fixing what can be fixed, first.” as Christine commented.

Journal Entry 3: Third Professional Development Meeting.

Today we were asked to consider two sets of questions, questions about the most important thing that had happened for us, personally, since the last meeting, and questions about the basic principles that we considered would be required for working together effectively, and what skills and qualities would be required to achieve that end.

The most significant event for me was a change in emphasis from a teacher- directed to a student-initiated program that had occurred with a group that were making a video about the culture of skateboarding. This had come about because I had actually let them find out for themselves what needed to be done. Their first attempt had been disorganized and the poor quality had been evident when viewed alongside a professional video. The students themselves realized that some better planning needed to be done. I did not need to tell them. The students’ own acknowledgement that their technical skills needed improving led to a renewed interest in the project with one group developing their own form of choreographic notation for skateboarding to enable them to script the action sequences. They also had to develop a plan to negotiate the release of some expert skaters from other grades and classes to assist in the production. The final product was one of which they were justifiably proud.

Our focus then turned to developing some principles for working together, students with teachers, teachers with other teachers, students with other students. Our wide-ranging discussion resulted in the following five basic principles for working in the middle school. We would need the following:

- Cooperation.
- Trust.
- Conviction.

- Courage
- Sense of Humor.

We thought the skills required to support these principles as follows:

- A comprehensive range of research and planning skills.
- The capacity to be flexible when planning.
- A sense of what is really important.
- The ability to identify constraints.
- The facility to identify positives in what appear to be challenging situations.
- The ability to critically assess our own performance.

It is interesting to reflect that this outcome would not have been achieved without good communication. It would appear that ultimately conversation is the most effective means of communication within a school setting, whether conversations between colleagues, teachers and students, or teachers and parents. Chandler (2002) suggests that the following range of conversations occurs within schools (underlined). I have added brief examples of, what I believe from practical experience and the observation of colleagues, might be, the main constituents of those conversations (Italics).

- Clerical conversation. *How to get the computer to work; where to put the personal files; what happens to the copies of student reports; how to make a budget submission, and so on.*
- Interpersonal conversation with students. *Enquiring about their welfare. Did they enjoy a particular video; book; C.D. or T.V. show; was their sports team successful at the weekend; etc.*
- Collaborating conversation. *Commiserating with a colleague about a difficult student; suggesting teaching strategies; offering to help with curriculum planning; sharing teaching resources.*

- Personal sharing with students. *Enriching casual conversations where the teacher reveals their own views about significant issues and discusses their feelings.*
- Friendly, informal conversation among colleagues. *Discussing issues outside the immediate classroom situation or unstructured conversation about educational and broader issues.*
- Involvement in student conversation. *The teacher participates in a conversation between students related to the task in hand or about more informal topics.*
- Insights and thoughts. *Unstructured observations about classroom practice, curriculum development or student management which do not necessarily infer that immediate action need be taken.*
- Caring conversations. *Supportive dialogue with colleagues or students to address personal problems that may be school or home related.*
- Collegial, collaborative conversations. *Professionally-based informal or formal discussions related directly to classroom practice, curriculum development or student management issues, which, usually, infer that some action be taken.*
- Instructional conversation. *A means of informing colleagues or students about organizational matters which need to be commonly understood.*

(pp. 6-8)

I am attracted to the possibility that teaching itself might be considered to be a form of ongoing conversation, a dialogue that we have with the class, with individual students and to certain extent, ourselves. If we accept this proposition it puts the act of teaching in a different light and would mean that the profession of teaching may have to be reinterpreted with possibly a different set of skills required of its practitioners for as Chandler (2002) concludes

To think of teaching as conversation requires a shift from teaching-as-telling to teaching-as-sharing and teaching-as-dialoguing. This is not a small shift. When you think of yourself as holding moment-by-moment conversations throughout the day then students begin to become more like collaborators, and teachers begin to become facilitators of this collaboration. This is because conversations are about voices – gaining and giving voice and thus autonomy.

(p. 2)

Journal Entry 4: Meeting with Helen, the Principal to discuss the formation of a new class.

Our student enrolment had been steadily increasing throughout the first school term and consequently, under a staffing quota formula, we were entitled to one more teacher. The individual class sizes had increased a little, yet when viewed as a percentage of the whole grade, did constitute the equivalent of another class. The school's administrators in consultation with the school council had decided that the new appointment would be made to the middle school team, with a view to creating an additional home-group class, consistent with the school's policy of limiting class sizes in the junior grades. I had expressed some reservations about this course of action because the existing home-class groups had taken some time to develop their, now positive, social and learning environments. However, the school's administrators determined that they would proceed with the plan.

To create the new group Helen had suggested that we re-allocate three or four students from the existing seven home-groups. She had written to the parents seeking any expression of interest in the possibility of moving their child to another class and asking for an indication of any preference that they might have regarding who might accompany them. The response had been minimal, with only three or four families out of a possible two hundred, accepting the offer. Helen had then asked me to take a more proactive approach by counseling individual students, whom I considered might have benefited from a change of classroom environment, and by seeking parent support for that move. I had informed her that this exercise had not been particularly successful but was completed, and that I had managed to form the new class group that would operate from the beginning of second term.

This whole exercise was a fraught with difficulty. There were students who wanted to change class that did not have parental approval to do so, parents who wanted the move to be made but their child bitterly resisted, and home-group teachers who did not want to lose students with whom they had developed close relationships. Overlaying this was the school's class-size policy, which probably had no proven educational basis, but was seen by the community, the teachers' industrial advocates and some educators, as an indicator of a 'good' school. The application of that policy had overridden our suggestion that the new teacher be appointed to the middle school team 'without portfolio', as it were, to support our 'negotiated time' program and to work with individual students who needed academic support or extension.

Interestingly, the nimby (not in my back yard) syndrome became very evident during this exercise for there were parents who extolled the benefits, as they saw them, of a reduction in the size of the home-groups, provided that their child did not have to change class in order to achieve that outcome. A number of the middle school teachers shared a similar view, in that they saw it as a good idea, but did not want any students removed from their particular class group.

Personal Issues.

Journal Entry 5: First Individual Staff Meeting with Lynne.

The attempts at developing an integrated curriculum and team teaching methods have been difficult for Lynne as she has been used to a more structured style of teaching and we were developing new curricula and organizational structures whilst the program was in progress. However, I do not have a particular difficulty with this approach and would tend to support Fullan's (1993) belief that vision and strategic planning can come later, or as he puts it, "Ready, fire, aim." (p. 28).

Lynne was unsettled by this approach and needed to feel that there was a clear shared vision with rules and guidelines. On reflection, I feel that I probably did not do enough active listening in the early stages. I assumed that those staff who expressed an interest in becoming members of the Grade Seven team did so because they

believed in what we were trying to do and had taken the opportunity to put their beliefs about middle schooling into practice. Being relatively new to the school, I had no reason to think otherwise. Therefore, my early work with the team was very much concerned with things like the organization of classes, timetables and student management and welfare issues.

Lynne believed that she had been left to do a particularly difficult job with very little obvious support from the school's administration. She perceived that there were groups within the school who hoped that the initial grade-seven program would fail. Lynne also felt that she did not have the unqualified support of her partner and the other members of the team. Therefore, she found it difficult to maintain a positive outlook despite the fact that the curriculum initiatives that she has initiated, particularly a program integrating Science and the Humanities, were exemplary.

The issue reached a critical stage when Lynne negotiated a change from full-time employment to a four-day week. The Principal approved this request, but she knew that I had expressed my reservations about the change because of the consequent timetable re-arrangements and the effect that would have on her class and her partner.

There was, however a positive outcome as I was able to use this as an opportunity to develop a more personal relationship with Lynne which allowed me to offer regular valid feedback, that helped us to identify and address some of the difficulties. We agreed to regularly discuss classroom programs, student management issues and plans for the following year.

I am concerned that I used a number of academic quotations to support my conversation with Lynne and I am not sure why I did so. We have worked together cooperatively, have a good social relationship and helped one another develop the program that was being successfully run in her class. So I am certain that she would have accepted my judgment on its merits, or at least we could have discussed the issue in a practical way without resorting to academic evidence. I quoted a number of sources that stressed the importance of continuity for adolescent students and so

on, but I know that they were superfluous as she would have accepted my own view, that this, from experience, is the case.

I needed to be mindful about using this approach too often with Lynne; although there are other members of the team who would have enjoyed the opportunity. There, clearly, is value in using educational research to support one's case but one must be sensitive to the personalities involved, the issue, and the nature of the conversation. What might work well enough to convince a principal to take a certain course of action may not work so well with a colleague.

Journal Entry 6: Meeting with Christine.

An issue had arisen out of the parent-teacher interview sessions. Christine explained that the class had been working on a theme. After assessing a particular student's work, the parent had asked her for an explanation of the task. The work was based on the critical deconstruction of a text; something that the student had not done before in primary school. The student had found the work difficult and had not been very successful at that stage. This student had always received high marks for their work in primary school, so the parent had sought an explanation. Unfortunately, the parent had become verbally abusive and demanded that they should speak to the 'boss' and would not leave the room. So Christine collected her books and moved to another room to continue the parent interviews. The abusive parent had then gone to talk to the principal.

Christine had expected some support and was surprised when Barbara, the assistant principal, who was familiar with the learning program, had asked for her program of work, in order that the head of the English department might evaluate it to determine whether she was teaching effectively or not. Christine had found this a particularly disappointing decision by the person who had actually appointed her to the middle school team and whose ideas she was trying to implement. She had assumed that she had a degree of autonomy about the details of the curriculum and that her ideas would be respected. Christine was able to immediately submit her up-to-date lesson journal to the slightly embarrassed head of the English department who did not want

to become involved in the debate but did confirm that the program was quite appropriate for students at that level and had been well presented.

Christine believed that the tension between the middle school and the mainstream organization had exacerbated the situation. She felt that in a more traditional context the situation would not have become so difficult because the parent would have known that they should outline their problem to a head of department before going straight to the principal. She also commented that in a more traditional program the students might not have tackled critical analysis in the first year of high school, although it was consistent with our curriculum approach in the middle school. Christine explained that she perceived that she was being judged both for this particular instance and the middle school program in general. She felt unsupported by the assistant principal who was responsible for it.

This was a difficult conversation. In fact, I did not say much until Christine had been given the opportunity to explain the situation in full. I could only stress that I thought that this might be an isolated incident, but it is symptomatic of the developing conflict over curriculum 'ownership' that is primarily a result of uncertain management structures which do not effectively address this issue. There are some negative aspects inherent in the close relationship that the middle school teachers have with their classes. The 'upside' is that the relationship is highly beneficial and, the 'downside' is that when things go wrong the class teacher is likely to be held to blame because he or she is responsible for the greater part of the students' education.

I confessed to Christine that I regretted that there had been no statement from the school's managers that outlined the policy on middle schooling, what we were trying to achieve and how we were going about it. I suggested that possibly we should have done that ourselves in the absence of any official documentation, and we should prepare our own information for distribution at the next parent-teacher evening.

However, I was not sure whether I was being consulted or blamed. Was I the guilty party, Should I have foreseen this incident and as grade coordinator was I being held responsible for the breakdown between 'them' and 'us' or did Christine consider me

to be 'one of them'? Perhaps I should have organized some parent information session in the absence of any directive from the administration. I have observed, from my involvement in other programs that schools frequently attempt to develop initiatives from the 'bottom up', but then appoint an administrator from the 'top down'. However, the two converging systems rarely mesh together smoothly. I am coming to the conclusion that to effectively implement a new program in a school environment, it is essential to have someone, at least at the assistant principal level, embedded in it, as a home-class teacher, with few other general management responsibilities.

Journal Entry 7: Meeting with the Helen, the school Principal.

I am acting as an observer in a classroom, on Helen's behalf. She has concerns about Simon's ability and effectiveness as a teacher. He has undertaken a mentoring program with a colleague. Although he is not a member of the middle school team, I have been asked to prepare a report on his progress and performance.

This is being undertaken from a position of trust, as Simon nominated me from a pool of available senior staff. However, I am experiencing some difficulty with this task. I find it difficult to remain a neutral observer in his classroom. Where, I believe, his inappropriate management strategies are compromising the learning outcomes for most of the students.

I have been reading about effective teacher feedback and collegial supervision and am interested in Kilbourn's (1990) observations about the complexity of this process. He feels that there are many significant issues that serve as a backdrop to any given instance in this type of situation which inevitably contain many tensions. Therefore, one has to be aware of the following:

It is important that both the teacher and the observer have a clear understanding of who is responsible for what. The teacher's responsibility is to the students. It is the teacher who has responsibility for what happens in a classroom not the person giving feedback. It is the teacher who must weigh alternative strategies, plot courses of action, intuitively respond to

immediacies and existentially accept responsibility for the conduct of classroom life if not the personal learning of each child.

(p.103)

I begin to believe that this whole process was flawed from its inception. The guidelines were not fully understood by the participants. It became clear to me that Simon viewed me as a mentor, a supplier of solutions and a source of information, rather than an observer of his progress. As I understood the situation, the mentoring phase with a colleague was over, and the teacher was now taking on some degree of responsibility for his own actions. I was uncertain about the value of continuing in my role as classroom observer. However, discussing the Kilbourn article with Helen was a positive first step towards the resolution of a difficult situation.

I had mixed feelings when Simon nominated me as the classroom observer, who would prepare a report for the principal. In some respects I was flattered that he considered that I would be fair and objective as we are not personal friends, but also apprehensive about what would obviously be a tense situation. I would have preferred to act as his mentor believing that I would have undertaken that role in an effective and sensitive manner. Perhaps, in some respects, I resented the fact that I was not given that role and that was affecting my judgment as an impartial reporter, but I thought not.

On this occasion, using academic research as evidence to support my beliefs was the correct approach. Helen and I read the Kilbourn extract together which provided a useful starting point for our discussion. It helped clarify the situation to the extent that she suggested that Simon be given an extension to the mentoring period. This time the various roles and responsibilities were clearly understood by all participants. He was given the opportunity to nominate another classroom observer but declined the offer. I would have preferred that another member of the senior staff undertake the task: particularly the head of one of the faculty departments where most of his work occurred, but, to be candid, it suited my own agenda.

There was still a tension between the middle school team and the heads of the faculty departments, who were aware of the difficult nature of the reporting and supervision tasks that I had been given. Therefore, undertaking this role professionally and

effectively might help enhance my own credibility in a position other than that of middle-school grade coordinator. It might help me establish myself, in the eyes of the principal and the general school community, as a manager with high professional standards and integrity. My role would reflect well on the middle school and consequently assist any proposals that I made on its behalf.

Journal Entry 8: Individual Staff Meeting with Susan.

We spent a good deal of time reviewing a science program that is based around the local coastal environment. Susan and her partner, Lynne, had developed an interesting and comprehensive curriculum that utilized a number of visiting professional experts who work with students on topics such as the rehabilitation of an aboriginal midden, the re-vegetation of an area of Swift Parrot habitat and a survey of marine life and water quality investigations. The coordination of this program has taken a great deal of energy and commitment from the pair of teachers who had undertaken the task in an exemplary way. I had observed the students at work and participated in some of the activities so felt confident about discussing the progress being made. Susan wanted to review the last session where a group of boys had been difficult for their tutor. She felt that the boys had let her down and that, perhaps, the group should have been selected in some way. There was also that element of professional embarrassment that one has to deal with when students are difficult in a public setting.

This incident had come to my attention as Grade Coordinator, so I welcomed the chance to discuss the matter. We reviewed the planning process and the possible problems with unrestricted self-selection by students. At this point, I felt that Susan was actually asking for confirmation that this might have been handled more effectively. I agreed and thought that there were lessons to be learned from the incident but did not see it as a major issue in the overall scheme of things.

This was well received and she then suggested some plans for future tutorial sessions. At this point I was able to concur with her view that excluding some students might not be a good strategy and stated my belief that perhaps we had both been deficient in failing to ensure that the tutors themselves were equipped with some

good student management skills. I was delighted that Susan wanted to undertake this task which I saw as a very positive resolution of the situation and a means of overcoming any embarrassment, for it allowed her to re-establish herself with the tutors by offering them skills which they did not possess. We finished the session by planning a forthcoming class excursion to a water treatment plant and sewage treatment plant.

She invited me to accompany them. I accepted.

Journal entry 9: Second Individual Staff Meeting with Lynne.

The whole grade-team has been reviewing the program to date. However, Lynne had expressed some reservations about our progress and wanted to discuss them with me. Basically, she felt that the potential for a significant change in the curriculum had not been addressed. Lynne believed that the paired teacher arrangement was very successful but was still concerned that the change to a part-time teaching load was putting undue pressure on her partner. They had discussed this, but I did not think that it had been resolved. She believed that a full-time partner was required but that presented a dilemma as she was much happier with the reduced teaching allocation and would have liked to reduce it even further.

This was a difficult session, but one that achieved some positive outcomes. I did have to agree with some of Lynne's observations about our progress and confirmed her belief that teams did operate most effectively as a combination of two full-time staff. However, I did point out that they had achieved some excellent results from their innovative and interesting programs. We did agree that the changes had affected the class, yet acknowledged that the impact had been no more significant than that experienced by classes in the mainstream school, where groups were frequently re-organized for a variety of reasons.

She had reservations about continuing with the same group of students the following year or becoming involved with a new grade seven class but was concerned that there may not be other teachers who would be interested in becoming part of the grade seven team. This was a delicate issue as there were, in fact, a number of staff

who were very interested in becoming involved in the program. They had observed the paired teams at work and thought that they too would find the experience professionally rewarding.

I concurred with Lynne's view that working a three-day week would make it impossible to develop a workable arrangement with another team member but felt there were other valuable contributions that she could make to the junior curriculum. We discussed the possibility of providing a grade-wide remedial program or organizing the timetable so that all the students in grade seven had the same Art teacher; both roles in which she was highly qualified, experienced, and effective.

The meeting finished on a positive note.

Journal Entry10: Individual Meeting with Kerrie, a student in Susan's class.

Kerrie, an academically able student, had been experiencing difficulty in Susan's class, and having problems at home. She had become uncooperative, surly and disruptive to the extent that she had been excluded from class on a number of occasions. Susan and I had discussed the problem, worked out some strategies to address the situation and things had appeared to be improving until Kerrie had stormed out of the classroom yelling abusive personal comments at Susan. She had been found wandering around the school and brought to me to deal with in my capacity as grade coordinator. Kerrie had calmed down somewhat by the time I talked to her. Therefore she was able to start our conversation in a reasonably settled frame of mind.

Kerrie complained that she felt that she was being treated like a child when she wanted to be treated like a young adult. Too many people were telling her what was best for her and how she should conduct herself. She explained that she felt that Susan was being too protective and overly concerned about her social life out of school. She stated, "She is not my mother. She is here to teach me and as long as that's all she does, we will get on well together. I want to learn and will work hard as long as people don't keep asking about things that don't concern them."

I assured her that we only had her best interests at heart and were worried that things did not appear to be going well for her. Kerrie agreed to my request that we should not move her to another class and that she should try to work things out with Susan. She asked that I discuss the issue with Susan before she returned to class. I agreed.

Despite her angry exit from the class, Kerrie had been able to quite precisely and eloquently describe what she saw as the underlying issue. Perhaps in our attempts to provide a safe and caring home-class environment, we had encouraged close classroom relationships beyond the comfort level of some of our young adolescent students. Conventional wisdom stressed the importance of a caring classroom environment during the first year of high school. As a team, the establishment of that environment had been our first priority. Indeed, we had delayed our curriculum implementation until that was achieved, yet some students perhaps desired a fundamental change. They may have wanted high school to be dramatically different from their primary school experience. They might have been looking forward to the challenge of coping in a different environment; whilst others wanted the security offered by a home-class system.

A number of students who responded to my classroom survey mentioned that they would have enjoyed the opportunity to mix with students in other classes in order to establish a wider circle of friends, yet there were an equal number who had commented favorably on the home-class arrangement. I was reluctant to suggest that we should possibly consider phasing out the home-class groupings during the course of the grade seven year - perhaps one term in the home-class group, another where the students are re-allocated between the 'paired' teachers and a final term where the students are in flexibly organized groups for most of their timetable. However, our proposal for 'negotiated time' would have provided a possible means of addressing some of the students' concerns.

To have promoted a restructuring of this nature, which was contrary to our stated purpose, would have been difficult at that stage. It would have been met with dismay and, possibly, hostility by team members who were only then beginning to experience the benefits of the close relationships that they had developed with their students. However, it was an issue that needed to be addressed.

Journal Entry 11: Second individual staff meeting with Susan.

This was the most productive meeting so far. A teacher was absent on the day of the excursion, so it was particularly useful that I had arranged to accompany the group. The visit to the water treatment plant was interesting, although a few of the students became a little restless at times. On arrival at the following location we were informed that the tour could not proceed, because a guide was not available. At this point it started to rain, so the walk around a wetlands area had to be postponed as well. Susan decided that we should return to school and organize a local activity for the afternoon. I agreed.

She wanted to discuss the organization of the excursion and what, she saw, as deficiencies in the planning. We discussed the cancelled visit to the sewage treatment plant, and I had to express some concern that the arrangements had not been confirmed that morning. My comments were accepted and we agreed that over-planning was preferable to leaving things to chance. I reconfirmed her decision to abandon the excursion in the light of cancellations and deteriorating weather conditions and complimented her on the replacement afternoon program that she had organized.

This was an interesting session made more constructive by the shared experience of standing around in the rain with forty or more students wondering what might happen next. I felt that Susan had handled the situation very well and was aware that I might have waited far longer hoping for the weather to clear before making the decision to return early. I confessed to her that if the decision had been left to me I would probably have waited longer with the result that we would have had to deal with a group of saturated students and had insufficient time to organize a worthwhile alternative program. This admission was warmly received.

Admitting mistakes can be an effective stimulus for open discussion, if it is not done too regularly and the mistakes are genuine, and not the result of professional incompetence. The act of sharing an unsuccessful experience can be a positive team-building exercise provided that no attempt to apportion any blame is made. I remain

hopeful that one day a school principal will declare that they have made a complete mess of things and that they ought to start again.

Journal entry 12: Third individual staff meeting with Lynne.

This was a discussion about timetable changes and reduced teaching hours, and a very frank and open review of the new arrangements. Lynne felt much happier with the reduced contact time and found that generally this had been beneficial for the class as a whole. We were able to talk quite openly about the consequent salary reduction and what effect that might have and whether she would want to continue the arrangement next year. I was asked to comment on how I thought things were progressing and felt that my observations were well received, despite noting a few of the negative consequences. The new arrangements resulted in changes to my own timetable, and I was able to express my concern about the difficulty I had trying to balance her class- teacher period at the beginning of the day and my role as grade coordinator. We then discussed the consequences for the class that might result from having a greater range of teachers but agreed that regular consultation should address that issue and were able to negotiate a change in teaching allocation that would allow her to keep her class-teacher group if I agreed to take it on one day and took one of Lynne's lessons during the week.

To be candid I was annoyed that I had to take on the class-teacher group. The students were fine, and I enjoyed the opportunity to meet them on a regular basis, but it was exactly at this time that I regularly visited other classes, discussed minor matters with the team members, and was available to accept telephone calls and short visits from parents. I was less than honest pretending that the arrangement was satisfactory, for my interest in modifying the arrangement was not altogether altruistic.

I asked Lynne if she felt that it might be appropriate to explain the reasons for seeking the reduced work load. This was well received and she was genuinely interested to know what I thought about her reasons for seeking the change.

It appeared to be related to the dilemma that all conscientious teachers face, the balancing act between offering one's undivided attention to the wellbeing of the students and the realization that doing so to excess will, in fact, prevent one from doing that effectively. She was also very concerned that the relationship with her partner was one-sided. Lynne felt that she sought more support than she gave. That was certainly not my perception and the observation that I envied their working relationship was accepted without any disclaimer.

It was at that point that I felt some progress had been made. It was a 'good' talk because we had the courage to reveal our true selves, with the exception of my comments about the class-teacher group, but teachers often find this sort of personal disclosure difficult.

Curricular Issues.

Journal Entry 13: A meeting with Susan and Lynne to finalize their proposal for an integrated Science and Humanities program.

The teachers had been working together on this project and wanted to complete the documentation for their teaching program and 'test out' their proposal on a third party. They described the overall objective as one of developing in the students an understanding of the intrinsic value of the natural environment. This was to be achieved by a diverse examination of issues pertaining to conservation and biological diversity with the students entering into a participatory inquiry to investigate issues of personal interest. They saw this as a means of encouraging active learning, communication, evaluation and reflection and as being consistent with the principles of middle schooling outlined in chapter 2 of this document.

The unit of work entitled, "Ecological Sustainability" had been allocated three hours of class time over an eight week period. The investigation was based on "Key" learning areas of Science (Life and Living, Working Scientifically), Mathematics (Measurement, Statistical Analysis), Studies of Society and Environment (Investigation, Communication and Participation, Place and Space Resources) and

English (Contextual Understanding, Texts, Information and Mass Media, Language Structures and Features).

As a whole class activity, students were asked to consider and discuss issues related to the human impact on the environment

As an individual activity, students were invited to develop their own study around an issue of personal interest or concern. Students then planned the conduct of their investigation in conjunction with the teacher, preparing a formal proposal indicating the topic of study, the resources required, the achievable outcomes and suggested criteria for assessment. Students presented their findings using a variety of media and were encouraged to participate in a public presentation of their findings.

I was certain that this proposal would be successful but had some reservations about the need to specify exactly what subjects and what elements of those subjects were being addressed. I explained my dilemma to the teachers. Basically, I felt that using the existing subject based curricula and criteria was a good idea, provided that they were used as a planning framework which may lead to more interesting possibilities. They should not be seen as a means of justifying the program by demonstrating that it was addressing the needs of the former subject-based curriculum. I stated that I believed that the proposed unit of work did not need to be legitimized in this fashion as it clearly had an intrinsic value and would provide the students with excellent opportunities to develop their own ideas.

Personally, and this is a private observation, I was a little concerned that most of the proposals for integrated programs seemed to be environmentally skewed. I did not have a problem with that provided we moved on to look at other issues. I realized the environmental emphasis was inevitable given the school's location and we should have used this to attract the student's interests, but we needed to move beyond this topic. I was determined that my own integrated program would be different, but was setting myself a challenge, as there would be some pressure to prove that it could be done.

Journal entry 14: Individual Staff Meeting with Susan.

We were discussing the integrated Science and Humanities program being undertaken by Susan and Lynne. I had asked her why she had taken an interest in Science and then specialized in teaching the subject at the high school level. She said that there had been no particular experience or incident that was significant but she had enjoyed the subject, particularly the Natural Sciences at primary and secondary school. However, Susan did mention a Biology teacher that she had admired and respected. Yet she could not be sure if it was because they already shared a common interest or that the teacher had helped to develop that interest. She stated that she did not see herself as artistic so had gravitated to the Sciences when subject choices had been made. Susan had been successful and particularly interested in Biology but felt that this might have been because of the school system at the time where, after a certain point, one chose either the Life Sciences or the Physical Sciences. This early specialization had proven to be a problem when she started teaching as she needed a much broader understanding of the whole subject field. Susan had felt insecure and uncertain of her knowledge base, believing that she did not have the necessary knowledge base stating, for example, that her Physics and Chemistry were self-taught.

I was intrigued with the way in which she had compartmentalized the subject field. We discussed this issue noting that it was a relatively recent phenomenon dating from about the time of the industrial revolution. People like Leonardo and Galileo did not consider themselves to be specifically Engineers or Astronomers or even Scientists as such. We thought that perhaps using a contemporary version of a renaissance style of education might be a useful way of developing our middle school curriculum.

The discussion was very productive. Susan appeared to enjoy the conversation and understood what I was trying say. But in order to develop this as a workable proposition I would need to give serious thought to how I would present this idea to the whole team. What examples would I use and could I also explain clearly what I did not mean?

The conversation was valuable for the questions it raised: why use 'compartmentalization'? Perhaps that was the wrong interpretation for the 'com' could be equally well understood as relating to 'com'munity or shared experience and not necessarily an isolation of the parts. I saw the compartments like those in a railway carriage, where the passengers are not actually disconnected from the train, are traveling in the same direction, but unaware of the other travelers. I have heard school organizational structures also likened to fishing-tackle boxes, with all the pieces in their own sections, in the same box, sharing the same overall purpose but the 'hooks' not knowing what the 'sinks' are doing.

Journal entry 15: Meeting with Richard and Christine to consolidate the separate elements of a program entitled, "Would You Kill a Spider?"

Each teacher had prepared their own material and both were anxious to produce the final curriculum document for the unit that would be allocated three hours each week, over an eight week period. The work would be based on the "Key" learning areas of, Science (Life and Living), Mathematics (Measurement), Studies of Society and Environment (Natural and Social Systems) and English (Information and Mass Media, Contextual Understanding, Listening and Speaking).

The purpose of the unit of work would be to engage the students in a discussion about how all our actions might have long term consequences in terms of ecological sustainability. They would be asked, for example, whether they might kill a spider, if it crawled onto their book during a silent-reading session.

They would be encouraged to share their views. Then working in groups of four, one pair adopting a positive perspective and the other a negative stance, debate the issue. The students, working in the same groups, would be then invited to present a contrary view and revisit the debate using the existing arguments or formulating new ones. The students would be asked to consider the broader question, "What footprints do you leave on the world every day?" The teacher could model a timeline of their own actions during the day and ask the students to list the positive and negative environmental impacts of those actions. The students might then repeat the process on the basis of their own day.

The major element of the program would be a detailed analysis of the school's immediate water catchment area through field studies, undertaken in conjunction with outside agencies. The research would specifically investigate the impact of human intervention on the environment. The students would be invited to reflect on their understanding of ecological sustainability and suggest personal actions that they might take to improve the situation. The criteria for assessment and methods of presentation would be developed in consultation with individual students during the course of the program.

I found it interesting that this was the second proposal for a unit of work which is based on the notion of ecological sustainability. Our conversations about Charlotte Anderson's (1994) "Global Understandings", and how it might be a useful aide to developing our own curriculum, perhaps, made this inevitable. However, this meeting had me questioning our underlying purposes. For example, were we right to take such a proactive stance towards positive environmental practices? Were we politicizing the curriculum? Were we imposing a 'middle class', 'first world', perspective on what is a global issue? I am still not sure about this but do understand that we have to operate in the context of our own immediate society, which, I believe, is acceptable, provided that we encourage our students to understand that there are other values that may be appropriate in other cultures.

I am beginning to have reservations about the wholesale integration of subjects, for there is a paradox. Clearly the specialized knowledge of the learning areas is important but connected knowledge is equally valuable. Integration has been seen as the key to successful middle schooling, but very little debate has taken place about whether this is, in fact, the best curriculum model for adolescent students. There has been a widely accepted assumption that an integrated curriculum and middle schooling are interconnected. Indeed, the Australian Secondary Principal's Association (1994) puts it quite clearly.

A less subject-centered approach to learning is often successful with adolescents. If this can be linked to their immediate emotional and social needs, then there is a high chance of acceptance and success. Most young adolescents do well in learning tasks that are success oriented and usually over short

timeframes. The curriculum should have opportunities for negotiation and active participation. (p.1)

However, Chadbourne (2002) in his report on middle schooling, commissioned by the Australian Education Union, notes that

There is conflicting evidence about the success of integrated programs. Early studies reported that students in various forms of integrated programs performed better, or as well, on standardized achievement tests, than students enrolled in separate subjects. However, studies on integration from the United States, the United Kingdom and Asia over the past half-century concluded that, although the earlier studies gave the impression that curriculum integration had many positive elements over single discipline teaching, there is a dearth of evidence of a positive or negative nature over recent years.

(p.1)

The discussion with Richard and Christine has given me some clues about how we might avoid the fragmentation of knowledge that occurs in a traditional curriculum and guard against the trivialization of the subject areas that can occur in a thematically based integrated program. I believe that we should be trying to develop what, I would describe, as a convergent curriculum; one where the discrete knowledge of the various subjects is on a convergent path leading to an intersection at a 'big' idea. This curriculum model would be inclusive and participative. It would be interconnected and interdependent with the real world. It would focus on big ideas. It would contain moral and ethical elements. It would be responsive and, above all, it would be rigorous.

It would not be necessary for any subject area to relinquish its status, but it may result in a radical redesign of timetables and conventional subject distinctions. It could also mean that the teacher may not necessarily remain in a traditionally neutral role and might have to disclose his or her own beliefs and values related to the big questions being studied. This would entail a significant shift for those of us who have traditionally prided ourselves on objectivity and neutrality. Generally, there are two common curriculum models to be found in high schools, a traditional subject-based model and a form of integrated curriculum, which is usually thematic

in style. They are not mutually exclusive, Fensham (2201) describes examples of thematic integration, within traditional subject parameters, whose aim was

To reduce the diffuseness of the long lists of science learnings by choosing larger themes or real world contexts that would enable a number of the discrete pieces of content to be studied in an integrated way, This is a sense of integration within a science curriculum itself, instead of the more usual meanings of integration that have a cross-curricular sense. (p.1)

Schools, generally, use a combination of both models, frequently favoring the more traditional style in the senior grades and the more thematic style in the junior grades. Cross-curricular programs, at their best, try to concentrate on ‘real’ world themes, Fensham (2002) suggests these, in the case of science, are the ones that

Integrate a number of science concepts and provide links with other curriculum areas which can be addressed in ways that fit well into the fields of social studies. That is, they have historical, geographical, social and economic significance. (p.2)

He does observe, however

For teachers who went that far there seems to have been a significant difference between a theme that is initially chosen for science study, and then extended to social science study, and a theme that is chosen initially for social study and then extended for science study. In the former case the maintenance of the science is easier than in the case of the latter. (p.2)

The traditional model could be viewed as a parallel arrangement, where the subject areas run side-by-side. Each is usually quite clear about its own aims but they may be different from those of other subject departments and could have little in common with the school’s overall objectives. In its least effective form the thematic model can actually become a divergent form of curriculum, where the theme itself becomes little more than a vehicle for the subject departments to use for their own purposes. For example, the Mathematics, Science, Art, or English programs may be connected to the theme but they are not connected to each other in any other way.

The convergent curriculum might be seen somewhat like the traditional image often used to demonstrate how perspective might be depicted in a drawing, where the

railway track with its accompanying telephone poles appears to converge towards the horizon or vanishing-point (V.P.) However, in this case, it would not be a vanishing point, but a point at which the individual elements of the curriculum converge to form a big idea (C.P.) The traditional subjects might be seen as the rails and poles with the point of convergence being a commonly held objective. It would be a model that uses the discrete and specialized knowledge of the learning areas but, rather than traveling in parallel, they would be on a convergent path towards an authentic bigger issue. The congruence could provide a powerful learning experience.

Journal entry 16: Grade Seven Team curriculum meeting.

This was an opportunity for each teaching team to present their proposal for an integrated Science and Humanities program. Each 'pair' outlined their plans for the next unit of work describing how it might be developed, what resources would be needed and what final outcomes might be anticipated. The proposals included an ecological and ethical debate around the question of whether one would kill a spider, a program in conjunction with a community land-care group to rehabilitate a wild bird habitat, a sociological and scientific investigation, in partnership with a university, into the local water catchment system and coastline, and a scientific study of the solar system in conjunction with a unit of work based on science fiction literature.

This was a very productive meeting. The staff had clearly enjoyed sharing their work with their colleagues and felt that at last there appeared to be some tangible results from the extensive program of staff development that had occurred. Earlier meetings had concentrated on developing pedagogical principles, models for teaching and learning and establishing a framework for the curriculum, and whilst this had been an essential first step the staff were now anxious to put these principles into action.

Each proposal for a Science and Humanities program seemed to have echoes of my own thoughts running through it. An interesting discussion about theories and absolute truths made me realize that I must be careful not to attribute some element of universal correctness to my own proposal. I must ensure that I describe it in terms

of suggestions for ideas that might be useful in certain conditions or with particular groups of students. If I fail to make this clear then my proposal becomes just another form of rigid theory. Whilst the content of the new curriculum might be attempting to avoid rigidity, mandating its use would see it become just another form of conservatism. I am not trying to develop a new 'scientifically' provable theory of curriculum, but rather one that might be suitable in the circumstances, or in Popper's (1959) terms, would be the best one that we could come up with at that point in time, given the circumstances and knowledge available to us.

Popper came to reject logical positivism. His Logik der Forschung, Logic of Scientific Discovery, rejects induction as invalid, and verification as impossible. He suggested that all we could really do was to disprove theory, only falsification provided certainty, and, that even the most constant and consistent positivist results could never actually prove an hypothesis or theory to be correct. Therefore, Popper saw the principal task of the scientist as attempting to falsify hypotheses.

I was confident that there would be colleagues who might delight in pointing out the inherent flaws in my proposal, its 'falsifiability'.

Journal entry 17: Meeting with the Head of the Science Faculty.

It became obvious that there was a tension developing between the teachers in the middle school, and those who worked predominately with the students in grades nine and ten. These tensions were predictable and were principally concerned with disagreements about curriculum ownership. There were related issues that needed to be immediately addressed, if the school were to manage the transition from the grade seven and eight program to the senior school program.

I was being pressured by the Science coordinator to provide a rigid Science curriculum framework document, so they would know "where to start in grade nine." We had some interesting discussions because I was not in a position to make any definitive statements about what material all of the students had covered. What I could say, however, was that some students had undertaken major coast-care projects in conjunction with the local marine laboratories; others had worked with the wildlife

authority on a tree-planting program; whilst others had been working with a university and a local land-care group to re habilitate the breeding habitat of a threatened species of parrot, and so on. These projects had blurred the traditional distinctions between the Sciences and the Humanities and I could not guarantee that all students had done the same work, or even similar work, during the year. Herein lay the fundamental cause of the tension.

The school was attempting to accommodate different models of curriculum and assessment in parallel and this would seem to be not an unusual state of affairs when fundamental curriculum reform is undertaken. Bean (2000) points out

One deterrent to curriculum integration is the fact that most state standards and proficiency tests are set up in terms of conventional subject areas, such as mathematics, science or social studies.

(p.1)

I was beginning to form the opinion that a teacher's position in this type of curriculum debate is determined principally by their own lived experience as a teacher and not by any particular educational theory. Therefore, if certain experiences predispose one to a particular view of the curriculum, recognizing that factor could be an aide to dialogue rather than a constraint. Setting out to change the long-held beliefs of an experienced teacher would be a difficult task laden with negative judgments about past practice. However, encouraging them to take a more 'ironic' view of the world, as described by Egan (1998), might be worthwhile. He believes;

Irony involves sufficient mental flexibility to recognize how inadequately flexible are our minds, and the language we use, to the world we try to represent in them.

Ironic understanding involves the further reflexive recognition that our minds and languages have other games to play as well as trying to represent reality; particularly they can play the generative games we call art.

(p.155)

Devising a professional development program that encouraged ironic understanding may well be an interesting means of resolving the tensions that exist in most schools.

The Journal: Some Observations.

As indicated in the introduction to this chapter, the events that I have chosen to recall and comment upon are, necessarily, only a small sample from my personal journal. I believe, however, that they are a representative sample of the issues that might occur, on a daily basis, within a school context. The journal contains other entries related to student management problems, the inadequate provision of physical resources, observations regarding matters of curriculum design and implementation, and notes about personal difficulties experienced by teachers, students and myself.

Reflecting on the journal entries and their underlying themes was a positive exercise which allowed me to discover or re-discover the significance of some of the factors often taken for granted, yet frequently overlooked, when schools are engaged in the process of educational reform. These may be considered to be basic.

- Initially, focusing on the creation of a positive school environment rather than a curriculum plan.
- Recognizing the importance of good communication and, specifically, communication through dialogue.
- Developing good relationships between teacher and learner.
- Understanding that the provision of adequate resources may be more significant than the actual number of students present in the classroom.
- Being sensitive when using educational research and academic evidence.
- Acknowledging the reality that teachers have to constantly “prove” themselves in the eyes of their peers and the community.
- Having the courage to reveal our true selves, despite the difficulty that teachers may find with personal disclosure.
- Realizing that creative and effective teaching programs should be considered on their own merits.
- Recognizing that, whilst integration has been seen as the key to successful middle schooling, very little debate has taken place about whether this is the best curriculum model for adolescent students.

This reflection helped me clarify my own thoughts and values as well as, possibly, providing some additional detail to enhance the picture already constructed through the student surveys, student commentaries and teachers' stories.

The reader may be interested to know that the new class, created in term two, became a closely knit social group. However, their teacher, Graham, who could not be guaranteed continuing employment, resigned at the end of the term to take up a manager's position in a telephone call centre. Kerrie and Susan resolved their differences and developed a very close and productive working relationship. Simon was transferred to another school. Helen was appointed to an administrative role within the educational bureaucracy.

I believe that this chapter may have added a new dimension to my work, a fourth dimension, created by focusing on specific details that might not be evident in formal surveys, interviews or classroom observations. I feel that, in some respects, Peshkin's (2002) approach may allow the writer the opportunity to legitimately present their own beliefs, and possibly prejudices, within the context of a research project. That capacity may add a depth and richness to the study that might not otherwise occur.

Chapter Seven.

An Interlude.

If this were an empirically-based thesis, this would be the formal conclusion. However, it is becoming clearer to me, in some respects, there can be no conclusion. Each review of the resource material and each attempt to edit the existing text, presents new insights and understandings. Every time I read a new book, journal, or research paper, I find myself interpreting it in the context of my work. This, in turn, leads to a re-interpretation of the work itself. Each time I think that I have finally reached the point at which I could make some definitive statement about the implementation of middle school programs and I am in a position to suggest effective implementation strategies, new insights cloud the issue. Clastres (1994) explains this phenomenon eloquently when he says that

We travel on the surface of meaning, which slides a little further
away with each step we take to approach it. (p.36)

This should not prevent me from consolidating the research project in some way, but it does imply that this chapter can only ever be a pause for reflection, and never a conclusion. The following category headings may prove to be a useful device to achieve this end.

- The Research Process.
- The Writing Process.
- Some Findings.
- A Perception and a Suggestion.
- A pause for reflection.

The Research Process.

The application of a range of methodologies was, possibly, the most effective research strategy to use, given that I was attempting to describe what was a fluid and complex situation. The different methods appeared to complement one another. For example, the issues raised in the student interview commentaries were reflected in the statistical classroom environment study, as were the concerns and priorities of the teachers. Also the journal reflections provided a vehicle with which to further explore some of the issues revealed in the teachers' and students' stories.

Caffaso, Camic and Rhodes (2002), Fraser & Tobin (1991), and Creswell (2002) note the efficacy of multiple research methodologies.

Many identical dimensions of school climate were identified by the quantitative and qualitative approaches applied separately. However, important aspects of school climate emerged from interviews and faculty meetings (qualitative data) that were not identified in quantitative questionnaires. Similarly, climate issues that were not highlighted in the qualitative data emerged from the questionnaires. The integrated data yielded a picture of the climate in each school that was more complex than that which would have emerged from the application of only one of the analytical methods.

Caffaso, Camic and Rhodes (2002, p.1)

For a number of years now, workers in various areas of educational research, especially the field of educational evaluation, have claimed that there are merits in moving beyond the customary practice of choosing either qualitative *or* quantitative methods and instead combining qualitative *and* quantitative methods within the same study

Fraser, B, J & Tobin, K (1991, p. 271)

The use of multiple methodologies appears to address some of the doubts raised regarding the rigor of academic research which relies solely on qualitative methods. This was an issue of concern to me at the planning stage for I felt that it would be risky to move away from the field of purely quantitative research; yet I am pleased that I did so.

Interestingly as the work progressed, the concern about which specific research method or methods I should use, became less of an issue. It was if, through some

evolutionary process that I cannot quite explain, the work developed a methodology to suit itself. In some strange way it appeared to become its own methodology. The tension between the requirement that the work be presented in a conventional format and my interest in developing a surreal curriculum, was producing a methodology that was not quite a reflection of established research practice nor a radical surrealist model; it was something in between. Chapters one, five and six appear to be examples of this phenomenon.

Yet, I found that weaving the quantitative and qualitative methodologies together did appear to enhance both. I did not want my work to become a debate about the validity of any specific research model yet was concerned that the work should be seen as legitimate; particularly as major biographical and autobiographical elements figured within it. Bullough, Jr. & Pinnegar (2001) point out that

Self-study framed as autobiography or conversation place unique and perhaps unusual demands on readers; and it demands even more of those who seek to produce it. (p.20)

However, they then provide some useful benchmarks which may help establish the validity of this type of research

- 1: Autobiographical self-studies should ring true and enable connection.
- 2: Self-studies should promote insight and interpretation.
- 3: Autobiographical self-study research must engage history forthrightly and the author must take an honest stand.
- 4: Biographical and autobiographical self-studies in teacher education are about the problems and issues that make someone an educator.
- 5: Authentic voice is a necessary but not sufficient condition for the scholarly standing of a biographical self-study.
- 6: The autobiographical researcher has an ineluctable obligation to seek to improve the learning situation not only for the self but for others.
- 7: Powerful autobiographical self-studies portray character development and include dramatic actions: something genuine is at stake in the story.
- 8: Quality autobiographical self-studies attend carefully to persons in context or setting.
- 9: Quality autobiographical self-studies offer fresh perspectives on established truths.
- 10: Self-studies that rely on correspondence should provide the reader with an inside look at participants' thinking and feeling.
11. To be scholarship, edited conversation or correspondence must not only have coherence and structure, but that coherence

and structure should provide argumentation and convincing evidence.

12: Self-studies that rely on correspondence bring with them the necessity to select, frame, arrange and footnote the correspondence in ways that demonstrate wholeness.

(pp, 16-20)

The data collection for the classroom environment survey proved to be straightforward, as the students were genuinely interested in participating in the study and the instrument itself was a proven one. I had previously used a similar version and, therefore, was familiar with the organizational requirements and the technical processes required for the collation of the data into a useable form. I noticed, however, that days spent on the collation of the questionnaires often resulted in a simple bar-graph and three line analysis, and, similarly that when the stories, obtained from the interviews, were re-told they seemed to shrink. Hours of interview tapes and pages of transcript would be reduced to a few pages when my questions, repetitions, and extraneous comments and interjections were removed. I began to doubt that I would ever have enough useable research material or time to develop the thesis. I started to understand the dilemma faced by Tristram, in the Sterne (2003) novel, "The Life and Opinions of Tristram Shandy, Gentleman." In which, Shandy spends two years writing up the first two days of his life and is concerned that he will never finish his autobiography.

The interviews needed to be organized to fit around the students' and teachers' busy schedules. Therefore, I had to discipline myself to do them on a regular basis. The process was an interesting experience. I found that during the first sessions, I had a tendency to ask too many leading questions (Appendix 2). Developing better questioning techniques took a while, but fortunately the participants were very patient. I found that there were problems when, at a later date, I questioned the interviewees about their comments. Although the general gist of the story was the same, the interpretation was not. As I did not propose that my work should be based on the application of hermeneutic principles, as valid as that might be. I had to make the decision that the initial commentary and my understanding of it would form the basis of the teachers' and students' stories. Although I realized that I had to halt the

interview process and start the stories at some point, I was also aware that one cannot ignore language and the interpretation of it. For as Gallagher (1992) notes

(L)anguage, however involves a dialectical turning: we do not
only have language, but language has us.
(p.83)

I anticipated that the journal entries would be relatively simple to deal with; after all I had written them myself. Yet it proved to be a challenging exercise. I clearly had to be selective in this task, as there were two spiral-bound notebooks full of material to choose from. Making a selection, one that would reflect the content of both journals, was difficult until I realized that I needed to identify some common threads or patterns running through them. The resulting categories appeared to work effectively. Writing the individual entries proved to be straightforward. However, I struggled with the journal reflections until I realized that they were, in fact, a type of dialogue, which gave me a means of developing a workable format for that chapter.

The Writing Process.

The use of multiple research models, in an attempt to create a multi-layered study of an educational environment, inevitably necessitated a corresponding multiplicity of writing formats including academic, technical, autobiographical, biographical, and dialogical styles.

By separating the chapters, I avoided the continuity problems that may be encountered when formal academic and non-academic styles are mixed, particularly, the way in which the insertion of quotations can punctuate the text in a way that affects the flow of that text. As a means of addressing that problem, I wrote the class stories as biographical accounts, and in other chapters devised strategies to separate the narrative elements from the formal analysis where possible. It was my aim that each chapter should be intrinsically complete, able to be read separately and in any sequence, yet when aggregated into a whole body of work there should be an overarching style that created a sense of coherence and completeness. Style, tone, and intention are interconnected and the choice of a style of writing is significantly more than a technical consideration for we reveal much about ourselves and our purpose in that choice. It is also a moral choice in that it reveals something about our

relationship with the participants in our research project. It is about how we will tell their stories. How we will treat their responses to questionnaires. How we will acknowledge their contribution, yet protect their integrity and privacy. Richardson (1998) suggests that

We can choose to write so that the voice of those we write about is respected, strong and true. Ironically, this kind of writing also contributes to the credibility of our own interpretive voice.
(p.38)

The tone of our writing is, I believe, a type of signature. It is, I suggest, the combination of style and tone that makes our writing unique and in the case of a proficient writer, recognizable. Maintaining a consistent tone, whilst juggling writing styles, I found to be difficult, and there were occasions when I regretted that my thesis was not purely quantitative or qualitative in nature. I am not certain that I achieved my objective. Yet, in my opinion, the work does have the appearance of having a sole author. I found that the writing itself became, in fact, another method of inquiry, a research tool. Through the process of planning, drafting, editing, re-drafting and so on, I discovered new understandings and insights about the material that I was working with, and about myself. For as Richardson (1998) also notes

Although we usually think about writing as a mode of “telling” about the social world, writing is not just a mopping-up activity at the end of a research project. Writing is a way of “knowing”- a method of discovery and analysis.
(p.345)

Academic Writing

When I refer to academic writing I mean a type of writing that conforms to a commonly accepted format to the extent that it has a certain similarity about it. It is writing that has the line-spacing ‘correctly’ set out, the quotations indented in the text and acknowledged according to convention, the colons, commas and full-stops in the ‘right’ places, references ‘properly’ listed at the end of the piece, and so on. Academic writing appears to be a type of literary balancing act, a matter of integrating the creativity of the author into a pre-existing framework. I do not, however, see academic writing and scholarly writing as being the same thing. Although one would hope that one’s academic writing would be both scholarly and

of interest to the reader. The key features of scholarly writing are described by Cooper, Baturo, and Harris (1998) in the following terms

Inherent in scholarly writing is the ability to design and maintain an overarching framework in which the pertinent arguments are embedded, the ability to evaluate statements and conclusions in terms of the framework, and the ability to monitor one's work from the readers' perspective.

(p.249)

I would suggest that any piece of writing may be scholarly. It is a matter of presenting one's viewpoint in a concise, well structured, and trustworthy manner. Scholarly writing, I suggest, can be undertaken in a variety of styles, be it an automotive workshop manual, a novel, a poem, the lyrics for a song, a script for a play or whatever.

Technical Writing

Educational research, as I see it, is about describing processes, collating, analyzing and interpreting the results obtained from the application of those processes. Technical writing, like academic writing, inevitably has a 'sameness' about it in the way in which processes are described and data is collated. There is a limit to the creativity one can apply to the collation of statistical results. However, one can be creative when it comes to the presentation of those results in the analysis and interpretation stage, where the author has more opportunities to experiment with the style of the text.

I had to develop a form of bar-graph to suit my particular study as I needed to clearly depict the responses to both questionnaires on the same graphic image. I used the existing classroom environment survey instrument but not the conventional form of presentation, and I had to and figure out how that might actually be produced on my home-computer. The graph, I felt, would give the reader an easy reference point and provide a pattern that might be followed in the written analytical and interpretational stages of the chapter. The style of graph did, I believe, suit the style of writing and provided a connection between the data from the survey instrument and the analysis and conclusions drawn from that data.

Autobiographical and Biographical Writing

Autobiographical writing is still considered contentious in some circles. However, it is becoming a generally accepted form of research. Bullough, Jr. & Pinnrgar (2001) note

Although debate still rages, a radically different understanding of the nature of research and subject/object relations has emerged. Some argue that subjects can no longer be studied as if they are atemporal (outside of time), determinate (predictable), or static (unchanging).

It has become accepted that educational researchers are not disinterested but deeply committed stakeholders in their own projects. Taylor & Settlemaier (2003) see the strength of autobiographical enquiry as its capacity to

Lay bare questions that have been hidden by answers. Through autobiographical inquiry, we might start to question that which seems unquestionable to us, a given fact, 'something that has always been there'. We might begin to confront what the phenomenologists call 'our natural attitude', that is our everyday way of thinking and valuing whose naturalness makes this process invisible to us; in much the same way that the fish is unaware of the water in which it exists. (p2)

Initially, I considered autobiographical and biographical writing as separate categories, and they possibly are. However, within the context of this thesis, I propose to treat them as the same, for they appear to share so many features. I am coming to the conclusion, after writing the stories of others and my own story, that the writer cannot avoid revealing himself in, what is on the surface, the story of another. I do not mean that the author deliberately misquotes the subject or selectively edits the text, but the act of re-telling makes the writer both observer and participant whether they choose to be or not. The autobiography of 'X' that I write today will be different from the autobiography of 'X' that I write next month and certainly the biography of 'X' written by someone else is going to be very different again. The key to writing truthful biographical accounts is, I believe, being sensitive to that possibility. Autobiographical and biographical writing are both narrative and reflective forms of writing. Whether it is the subject's reflection on their own life, the author's reflection on the life of the subject or the author's reflections on their own

understandings, and as such, I believe, are rich resources for the educational researcher.

Reflective Writing

Reflective writing is described by Hillocks (1995) as

A process of discovery and our inquiry results in a construction, an account of our observations and the transformations we impose upon them. When we write, that construction is very likely transformed again with the written product. (p.15)

It was an interesting, though difficult, task to write an autobiographical account as a biography so that I might view it reflexively, or as Salner (1999) put it, as an “other”. I had little success with the first attempt where I tried to tell my own story in the third-person. I frequently forgot who I was supposed to be! Better progress was made when I arranged that my supervisor interview me using the same broad questions that had been used with other teachers in the middle school team. Writing what was my autobiography as told by someone else, from the transcript of a taped interview, was a strange experience, but far more productive, for it provided me with a useful starting point for Chapter Five, Tom’s story.

Dialogical Writing

I was surprised to discover that some elements of my thesis had a dialogical aspect to them which had appeared to develop through the writing process itself, rather than from any conscious decision on my part to experiment with dialogue, as a form of educational writing. It was as if the writing controlled itself in some way and had developed a mind of its own. This was particularly apparent in chapters four and five, the reflexive and reflective parts of the thesis, but also evident in other parts of the work. The commentary on Tom’s story, chapter five, becomes a type of dialogue with the reader. However, the reflections on the journal entries, chapter six, at times become a type of three-way conversation between writer and reader and writer and themselves. There are parts that one might conclude are the transcripts of a recorded conversation or, indeed, a script. Changing the reflective commentary from plain

type to italics highlighted this phenomenon for me, but the dialogue was always there, I just had not noticed it. Perhaps, in the final analysis, all writing is a type of conversation, whether it is with a particular reader, readers in general, or one's self as the writer, or any combination thereof. One might be tempted to suggest that conversation, particularly in the field of educational research, is as much about seeking knowledge by informing one's self as it is about informing others

Some Findings.

It will probably come as no surprise that there were no surprises, no world changing theory of education, no educational equivalent of the theory of relativity, but, rather, some interesting insights. Whilst these insights may be predictable, I feel that they are, nonetheless, important to consider at both the local school and systems level. We already knew that primary school students are apprehensive about moving to high school. There is an array of literature to support this, and it would appear to be obvious that a positive classroom environment will assist student learning. However, the act of discovering, or re-discovering this for one's self, imbues that discovery with a particularity that enables the researcher to still see the obvious, but with clarity. It allows one an aspect that would not be possible from the vantage point of everyday life. An opportunity to discover that the predictable is still exciting, what Ozick (1980) eloquently describes as the realization

Nothing is so awesomely unfamiliar as the familiar that discloses
itself at the end of a journey. (p.142)

I noticed that, in some respects, the findings were predictable, yet there were degrees of predictability. Some of the discoveries, or re-discoveries, proved to be more predictable than others. I expected to find factors like a lack of clarity about goals; poorly defined management structures; and disputes over resources had negative impacts on the implementation of educational initiatives. However, I was surprised to re-discover that high levels of personal professional satisfaction may be achievable, despite the constraints mentioned above. I had forgotten how powerful positive relationships between teacher and students and a sense of collegiality amongst teachers can be. I am not suggesting, for one moment, that careful planning and adequate resources are not significant. However, to a certain extent, administrative

deficiencies may be overcome by high levels of teacher morale and sheer enthusiasm. I have observed that, usually, the reverse does not appear to be the case. I also re-discovered just how difficult it can be working in a middle school environment. One is not only faced with the continuing debate about the value of such programs but also the real challenges associated with educating students at a particularly difficult time in their lives. In an educational context, it does not get harder, although the potential rewards appear to be correspondingly high and well documented. Vines (2002) writing in the Australian Educator comments that

Middle schooling demands a great deal of hard work and dedication, at both an organizational level and in the classroom. It involves collaboration and negotiation, between teachers, as well as amongst teachers and their students. This usually means meetings, documentation and evaluation and a willingness to share, to be more open and take risks. It consumes time, energy and effort. But, paradoxically, the 'down side' seems to have, as its mirror, an 'upside' that can make it an overwhelmingly positive experience for students and teachers alike.

(p.14)

I had expected to re-discover that there was likely to be some disagreement about issues of school curriculum in the sense of what it actually consists of and, equally significantly, who actually 'owns' it. I was surprised by the intensity of that conflict. If I were asked to nominate a common thread or underlying theme within this thesis, then that would be it.

A Perception and a Suggestion.

Students, generally, do not appear to recall the academic content of a specific lesson or even a particular lesson itself, unless something else noteworthy occurred. It might be an inspired example of the teachers' craft, an unrelated but entertaining diversion, or, in some cases, a combination of both. I am hopeful that there are still some individuals, now in their forties, who remember, with affection, my lesson, where a tissue-paper hot-air balloon rose majestically from a bench, sailed gracefully across the room and crashed into the curtains, when a child opened the classroom door. The resulting, though minor, conflagration was a highlight of their grade seven program.

The school curriculum, its philosophical basis, style of delivery and content appears to be a topic of immense interest to policy makers, academic researchers, classroom teachers and, to a limited extent, parents, but not to the majority of young adolescent students themselves. Only one third of the students, interviewed on a regular basis, offered any comment about the curriculum. Of those, over half were generalized comments. For example, Michael commented that he would have, “Preferred it if all subjects had more exciting projects in them and some practical subjects had less theory.” Whilst Shane mentioned, “I would have liked less homework, or maybe good homework, interesting things like projects that followed my own interests.” Donna explained, “It would have been good to have some free periods for my own study, more independence, some sort of special subjects where I could choose my own topics.” Only Kerrie and Sarah mentioned any details about specific subjects. Kerrie would have, “Liked it if the grade seven program had been more exciting, more fun experiments in Science and more practical things like Woodwork.” Sarah said, “I really enjoyed the timetable and the new experiences like Art and Cooking.”

In most instances, provided that the work was of some interest and relevance, the majority of young adolescent students appeared to be more concerned about who their teacher might be, rather than the detail of what they might teach. This is confirmed in research studies by Wubbels (1993), Fraser (1994) and Wallace & Loudon (1994). Emma, an academically gifted student, explained it well.

The work was not as hard as I had feared, it was more involved and generally enjoyable depending on which teacher you had, if you had a good teacher you would want to do the subject, and if that was not the case then you would probably not want to do it, no matter how interesting it was. Fortunately all my grade seven teachers were pretty good.

However, educational researchers continue to be fascinated with the subject and it remains a topic of continuing debate within individual schools and in education systems. Whilst the majority of educators would view this debate as being one about the articulation and implementation of appropriate means by which the knowledge and values which will be required by their young people might be promoted, there is another dimension at the school and system level and that is a debate about power,

status, and resources. (Hargreaves (1989). Australian Curriculum Studies Association (1990). Tyack & Tobin (1994) and Watts (1999)).

It is somewhat ironic that curriculum ‘ownership’, rather than its actual content, appears to become the issue which divides high school communities, for young adolescents, generally, appear to have little preference for one subject over another or one style of curriculum over another. However, despite that apparent lack of interest in the details of the curriculum, the issue cannot be dismissed for, in some respects, the curriculum may be seen as the practical application of a school’s values and priorities. It is a genuine issue that concerns teachers and schools. Therefore, efforts should be made to find ways to ensure that debate about the curriculum takes place within an educational framework which, initially, is separate from any discussion regarding the management and allocation of resources.

It might be helpful if the debate were, in some way, held in ‘neutral territory’, and not viewed as a matter of choice between a traditionally conservative curriculum and a radically progressive one, but perhaps something else.

I have come to the conclusion that Surrealism may, possibly, help us to discover an alternative means of packaging educational programs. It would be a model that is neither based on Newton’s principles nor Quantum Physics, yet it could contain elements of both, and, by its very nature, raise new questions. However, it would still be recognizable or, at least, its components would be. A Surrealist curriculum would, perhaps, be less threatening for our more conservative colleagues than an Abstract Expressionist version, which might frighten them into angry, terrified responses, and determined opposition. I would prefer, however, rather than using Surrealism in general as a model which may help explain my proposition, to use one particular painting by Rene Magritte.

The typical surrealist device of juxtaposing common objects in unexpected contexts appealed to this Belgian painter, who, although influenced by the Paris group, did not share their flamboyant lifestyles. He was a quiet and thoughtful man who preferred anonymity spending most of his career in Brussels where he developed a realistic style of painting that reflected his early training in commercial art. The program or

individual units of work in my Surrealist curriculum might be likened to Magritte's painting "Time Transfixed." (Chapter one)

In this painting each element is faithfully rendered with complete accuracy and faultless technical skill, retaining its own fundamental integrity. The train is a train, the fireplace a fireplace, the clock is a clock, each makes sense in its own right, but the strange combination raises questions and somehow enriches all of the elements. It is clearly more than a sum of its parts. Therefore, in a curricular sense, the Science would be real, demanding and technically excellent, as would the English or Art or whatever, but the combination or re-combination of those elements would lead to the creation of something that was more interesting and challenging than the original components, or subjects, in isolation.

There is a possibility that using an Artistic, rather than Educational metaphor, may be advantageous in that it could also provide an alternative framework in which to locate curricular debate. It might allow the participants to retain their core beliefs, or world views, whilst engaging in risk-free discussion about possibilities for improvement. It could, perhaps, provide a mechanism through which the 'either-or' factors might be removed from an agenda to be replaced by an element of 'as well'. A distinguishing feature of the Surrealist curriculum may, possibly, be its capacity to encourage teachers and students to present their work in a variety of creative ways.

A Pause for Reflection.

One of the difficulties with using a hologram as a metaphor upon which to construct a thesis is that it creates a demanding criterion for success. In a technical sense, holograms either work or they do not. They either produce, what appears to be, a solid object or merely an interesting display of colored light.

Therefore, to determine whether I have succeed in my stated objective of creating a multi-dimensional image of a school environment one has to be aware that all the research lenses need to be activated concurrently in some way and then observed at a point where they converge, which means that the reader has to somehow view the text simultaneously, despite the linear style of the thesis. This does not imply that each research lens may not be valid in its own right but that the possibility for rich understanding occurs where they intersect, with the added complication that this will, probably, be different for each observer.

The advantage of the metaphor lies in the requirement that the light from each lens should not be identical, or in a research sense, that the material drawn from each research methodology is not exactly the same. For, in some respects, endlessly reconfirming the same data may only, at best, provide a crystal-clear, but flat, and monochromatic image.

Whilst there are overall themes that reoccur throughout this thesis, the specific detail and relative importance of the issues, in the opinion of the participants, is variable. Therein lies its strength, yet it can never be complete and neither can its hologram, for it would, in reality, be a type of continuous animation. I believe, however, that the work does present a multi-dimensional image of a school environment even though, to some extent, its format results in it being static.

I am confident that the work is rigorously constructed. Chapter four (Voices from the Classroom), chapter five (Tom's Story), and chapter six (The Journal) meet the criteria noted on page 168; Chapter one, the play, (Time Transfixed) is carefully crafted within the conventions of that genre; and chapter three. (The Classroom Environment Survey) conforms to the technical requirements of that style of

research. I would claim that each element of the work is as technically well rendered as the individual elements within the painting, “Time Transfixed”. However, presenting the individual elements of the thesis within the same frame, and at the same time, has proven to be a difficult task.

Yet, at this point, if we were to revisit the Prologue (page.1, para.2) and pose the question; “has the work met my initial expectations?” I think the response may be, “not yet”, “partially”, and “yes”.

I hope this work does encourage other educational researchers to seek new ways of ensuring that the voices from our classrooms are acknowledged, carefully listened to, and then used to inform our efforts towards improving the outcomes for the students in our care; I do not think that we are quite there yet.

The research work did have an impact on our thinking as a middle school team. We started to question the common understanding, that within an Australian context, the term, middle schooling, generally implies that high quality relationships depend on social organizations modeled on primary school practice, and that a fully integrated curriculum is the most effective way of encouraging young adolescents to discover the connections between the traditional subject areas.

Finally, the answer to, “what I have been doing as teacher for the last thirty years?” — I think I may have been writing this thesis.

Epilogue.

The reader will have detected the irony in this work in that it does not model the curriculum that it advocates. This should not be seen as implying that surrealism, as defined within the thesis, (the work of Magritte in particular) may not be a model upon which one might construct a school curriculum. Rather, that it reflects the unresolved tension between the initial candidacy proposal (app.4) and the requirements of the university. This should not be construed as a form of justification but as an explanation; for I believe that it is possible to write educational research in a surreal form. However, this may need to be undertaken in a form other than a university thesis.

My first proposal envisioned the whole text as a continuing conversation between the author and the artist which would form the ‘canvas’ upon which the juxtaposed images ‘chapters’ would be assembled. In a visual sense, it would be as if the first page of an automobile handbook; pictures of dolphins, polar bears and wind-chimes; samples of three of Magritte’s paintings; and the portraits of Andre Bauge (star of the Opera Comique), Cardinal Bellarmine (the Pope’s Astronomer), and the scientists Max Planck and J. Robert Oppenheimer appeared in the one picture. In a textual sense this would mean completely abandoning the conventions of academic writing (no table of contents; chapter headings; citations; reference section or appendices) and might be presented in a format where each page resembles a broad-sheet newspaper. The ‘conversation’ (chapter one) could form one, narrow, left-hand, column. The balance of the page might be sub-divided into frames in which the balance of the thesis is presented concurrently. Thus each page resembles a page from Magritte’s sketchbook and the whole text becomes a major work.

This should be my next step.

References.

- Alexander, T. (1987). *John Dewey's Theory of Art Experience and Nature*.
New York: State University of New York Press.
- Amster, R. (1999). Ethnography at the margins: Vagabonds, Transients, and The Specter of Resistance. *Humboldt Journal of Social Relations*, 25.
- Anderson, C. C. (1994). *Global Understandings: A Framework for Teaching and Learning*.
Alexandria, Virginia: Association for Supervision and Curriculum Development.
- Aoki, T. T. (2003). Locating Living Pedagogy in Teacher "Research": Five Metonymic Moments. In Ludt, E. H. & Hurren, W. (2003) *Curriculum Intertext*. New York: Peter Lang.
- Arcilla, R. V. (1995). For the Stranger in My Home: Self-Knowledge, Cultural Recognition, and Philosophy of Education. In Khol, W. (Ed.) (1995). *Critical conversations in the philosophy of education*. New York: Peter Lang.
- Aroni, R., Goerman, D., Stewart, K., Sawyer, S., Abramson, M., Thein, F., & Douglas, J. (1999). Concepts of Rigour: When Methodological, Clinical and Ethical Issues Intercept. Paper presented at A Q. R. Conference 1999.
- Australian Secondary Principals' Association. (1994). *Middle Schooling Policy*.
Retrieved February 5, 2000. <http://www.aspa.asn.au/polmdsch.htm>
- Australian Curriculum Studies Association. (1990). Principles for Australian Curriculum Reform. *Curriculum Perspectives*, 10, 1.

- Barone, T. (1995). Aesthetics, Politics, and Educational Inquiry. In Kincheloe, J, L. & Steinberg, S, R. (Eds.) (1995). *Counterpoints, Studies in the Postmodern Theory of Education*. New York: Peter Lang.
- Barratt, R. (1998). *Shaping Middle Schooling in Australia: A Report of the National Middle Schooling Project*. Canberra: Australian Curriculum Studies Association.
- Beane, J, A. & Vars, G, F. (2000). *Integrative Curriculum in a Standards Based World*. Retrieved January, 8, 2003.
[www.http://ericeece.org/pubs/digests/2000/vars00.html](http://ericeece.org/pubs/digests/2000/vars00.html)
- Buechner, F. (1991) *Telling Secrets*. San Francisco: Harper Collins.
- Bullough, Jr. R, V. & Pinnegar, S. (2001) Guidelines for Quality in Autobiographical Forms of Self-Study Research. *Educational Researcher*. 30, 3.
- Burns, K. (2000) *Mark Twain*. Australia: A.B.C. Digital Video Disc.
- Board for Lutheran Schools. (1999). *Managing Change- An Overview*. Retrieved March, 4, 2003.
http://www.lca.org.au/schooldevmodel/no_frames/change/managing.html
- Byrnes, C. (1997). *Reflections on Michael Fullan's Visit*. Southern Cross University. Retrieved March, 23, 2003.
<http://www.scu.edu.au/schools/sawd/projects/Innolinks/13b.html>
- Cafasso, L, L., Camic, P, M. & Rhodes, J, E. (2002). *Middle School Climate Examined and Altered by Teacher-Directed Intervention Assessed Through Qualitative and Quantitative Methodologies*. Retrieved December, 20, 2002.
<http://www.nmsa.org/research/rmle/rmle/article>
- Calvacoressi, R. (1984). *Magritte*. Oxford: Phaidon Press.
- Capra, F. (1991). *The Tao of Physics*. Boston: Shambhala.

- Chadbourne, R. (2002). Middle Schooling for the Middle Years: What Might the Jury be Considering? Report commissioned by the Australian Education Union. Jan. 2002.
- Clandinin, J. D. & Connelly, M. F. (1998). Personal Experience Methods. In Denzin, N. K. & Lincoln, Y. S. (Eds.) *Collecting and Interpreting Qualitative Materials*. London: Sage Publications Inc.
- Clastres, P. *Archeology of Violence*. New York: Semiotext.
- Combs, M. P. (1995). *Representative Research: A Qualitatively Driven Approach*. The Qualitative Report, 2, 3. Retrieved May, 5, 2000.
<http://www.nova.edu/ssw/QR/QR2-3/combs.html>
- Cooper, T. J., Baturo, A. R. & Harris, L. (1998). Scholarly Writing in Mathematics and Science Education Higher Degree Courses. In Malone, J. A., Atwey, B., & Northland, J. R. (Eds.) (1998). *Research and Supervision in Mathematics and Science Education*. Mahwah New Jersey: Lawrence Erlbaum Associates, Pub.
- Creswell, J. W. (2002). *Research Design: Qualitative, Quantative and Mixed Methods Approaches*. Thousand Oaks, California: Sage Publications, Inc.
- Daniels, D. C. (2002). *Becoming a Reflective Practitioner*. Westerville, Ohio: National middle school Association. Retrieved March, 4, 2003.
<http://www.nmsa.org/research/articles/res-articles-may2002b.htm>
- Deighton, N. & Hocking, A. (1999). Switching on Learners in the Middle Years: A Pedagogy of Engagement Through Learning Technologies. Paper presented at the National Middle Years of Schooling Conference, 1999.
- Denzin, N. K. & Lincoln Y. S. (Eds.) (1998). *Handbook of Qualitative Research*. Thousand Oaks, California: Sage Publications, Inc.

- Denzin, N, K. (1998). The Art and Politics of Interpretation. In Denzin, N, K. & Lincoln Y, S. (Eds.) (1998). *Handbook of Qualitative Research*. Thousand Oaks, California: Sage Publications, Inc.
- Denzin, N, K. & Lincoln Y, S. (Eds.) (1998). *The Landscape of Qualitative Research: Theories and Issues*. Thousand Oaks, California: Sage Publications, Inc.
- Dinkleman, T, D. (2000). An Inquiry Into the Development of Critical Reflection in Secondary Student Teachers. *Teaching and Teacher Education*, 16, 2.
- Edmonds, D. & Eidinow, E. (2002). *Wittgenstein's Poker*. New York: Ecco, Harper Collins.
- Education Victoria (1999). Redesigning the Middle Years- A Resource for Schools. (draft) Melbourne: Education Victoria.
- Egan, K. (1998). *The Educated Mind: How Cognitive Tools Shape Our Understanding*. Chicago: University of Chicago Press.
- Eisner, E. W. (1972). *Educating Artistic Vision*. New York: Macmillan.
- Evans, H. (1998). *From Other Worlds*. London: Carlton.
- Fensham, P. (2001). Science as Story: Science Education as Story. *Asia-Pacific Forum on Science Learning and Teaching*. 2, 1, 1.
Retrieved January, 19, 2004.
http://www.ied.edu.hk/apfslt/v2_issue 1/foreword/foreword2.htm .
- Fensham, P. (2001). Integration: An Approach to Science in primary schooling. *Asia-Pacific Forum on Science Learning and Teaching*. 2, 1, 10.
Retrieved January, 19, 2004.
http://www.ied.edu.hk/apfslt/v2_issue 1/fensham/fensham7.htm

- Fischer, C. T. (1994). Rigor in Qualitative research: Reflexive and Presentational. *Methods Annual Edition*, 21, 27.
- Fisher, D. L. (2000). Paper presented at Professional Institute, Curtin University of Technology, SMEC. 702. Hobart, Tasmania.
- Flowers, N., Mertens, S. B. & Mulhall, P. F. (2000). *What Makes Interdisciplinary Teams Effective?* Retrieved March, 6, 2002.
<http://www.nmsa.org/research/res-articles-march2000.htm>
- Ford, M. C. (2001). *The Ten Thousand*. London: Orion Books.
- Foucault, M. (1972). *The Archeology of Knowledge & The Discourse on Language*. New York: Random House, Pantheon.
- Fournier, G. (1994). *Amilcar*. Paris: Retro-viseur.
- Fraser, B. J. & Walberg, H.J. (Eds.) (1991). *Educational Environments. Evaluation Antecedents and Consequences*. London: Pergamon.
- Fraser, B. J. (1994). Research on Classroom and School Climate. In Gabel, D. (Ed.) (1994). *Handbook of Research on Science Teaching and Learning*. New York: Macmillan.
- Fraser, B. J., Fisher, D. L. & Mc Robbie, C. J. (1996). Development, Validation and Use of Personal and Class Forms of a New Classroom Environment Instrument. Paper presented to American Educational Research Association, New York.
- Fraser, B. J. (1996). Grain Sizes in Educational Research: Combining Qualitative and Quantitative Methods. Paper presented at the Workshop/Seminars on Research Methods in the Study of Science Classroom Environments, Taiwan. May 1996.

- Fraser, B, J., Treagust, D, F., Williamson, J, C. & Tobin, K,G. (1986)
Validation and Application of the College and University Classroom
Environment Inventory (CUCEI).
Occasional paper: Curtin University of Technology.
- Fullan, M. & Miles, M. (1992). Getting Reform Right: What Works and What
Doesn't. *Phi Delta Kappan*, 73.
- Fullan, M. (1993). *Change Forces: Probing the Depths of Educational Reform*. New
York: Falmer Press.
- Fullan, M. (1995). The Evolution of Change and the New Work of the Educational
Leader. In Wong, K, C. & Cheng, K. M.(Eds.) (1995). *Educational
Leadership and Change: An International Perspective*. Hong Kong: Hong
Kong University Press.
- Gallagher, S. (1992). *Hermeneutics and Education*. Albany N.Y: State University of
New York Press.
- Gaunt, W. (1974). *Painters of Fantasy*. Oxford: Phaidon Press Ltd.
- Gitlin, A. & Russell, R. (1994). *Power and Method*. New York: Routledge.
- Gleik, J. (1998). *Chaos: The Amazing Science of the Unpredictable*.
London: Random House.
- Greene, M. (1986). In Search of a Critical Pedagogy.
Harvard Educational Review, 56, 4.
- Guba, E. G. (1996). What Happened to me on the Road to Damascus? In Hesthusius,
L. & Ballard, K. (Eds.) *From Positivism To Interpretivism and Beyond: Tales
of Transformation in Educational and Social Research*.
New York: Teachers College Press.

- Hammonds, B. (2002). *The Latest Ideas on Educational Reform*. Leading and Learning for the 21st Century, 1, 3. Retrieved February, 16, 2003. <http://www.leading-learning.co.nz/newsletters/vol101-no03-2002.html>
- Hankins, K. H. (1998). Cacophony to Symphony: Memoirs in Teacher Research. *Harvard Educational Review*, 68, 1.
- Hargreaves, A. (1989). *Curriculum and Assessment Reform*. Milton Keynes: Open University Press.
- Hargreaves, A. (1994). *Changing Teachers, Changing Times: Teachers' Work and Culture in the Postmodern Age*. London: Cassel.
- Hawke, C. (1999). *The Quality of Teachers' Lives*. Retrieved February, 2, 2003. <http://www.educ.utas.edu.au/conferences/ed4conf99/Strand-C/Hawke.htm>
- Hesthusius, L. & Ballard, K (1996). How Do We Count the Ways We Know? In Hesthusius, L. & Ballard, K. (Eds.) *From Positivism To Interpretivism and Beyond: Tales of Transformation in Educational and Social Research*. New York: Teachers College Press.
- Hillocks, G. (1995). *Teaching Writing as Reflective Practice*. New York: Teachers College Press.
- Hodge, J. (1995). *Salvador Dali*. London: Saturn Books.
- Kemmis, S. & Mc Taggart, R. (1982). *The Action Research Planner*. Victoria, Australia: Deakin University Press.
- Kilbourn, B. (1990). *Constructive Feedback: Learning the Art*. Toronto: O.I.S.E. Press.

- Kincheloe, J. (1991). *Teachers as Researchers: Qualitative Inquiry as a Path to Empowerment*.
London: Falmer Press.
- Kneller, G. (1965). *The Art and Science of Creativity*.
New York: Holt, Rinehart, Winston.
- Korzybski, A. (1933). *Science and Sanity*. The International Non-Aristotle Library,
(1958).4th ed. Retrieved August, 8, 2002. <http://www.gestalt.org/alfred.htm> .
- Linke, K. (1999). *Data Collection to Support Middle Schooling*. Western Australia:
Government of Western Australia. Retrieved July, 21, 2002.
<http://www.eddept.wa.edu.au?centoff/LAEP/laep535.htm>
- Marsh, H. W., Craven, R. G. & Mc Inerney, D. M. (2003) International Advances in
Self-Research. *International Advances in Self-Research, 1*.
University of Western Sydney Monograph Series.
- Maxwell, J. A. (1996). *Qualitative Research Design-An Integrative Approach*.
Thousand Oaks California: Sage Publications, Inc.
- Mc Beath, C. (1997). *A strategy for curriculum dissemination*. Retrieved March, 6,
2003. <http://education.curtin.edu.au/ier/ier7/mcbeath.html>
- Mc Kinley, S. (1998). *The problem of induction*. Retrieved March 24, 2003.
<http://www.ontic.co.nz/Science/Sci2.htm>
- Miller, K. W. (1999). Paradigmatic School Philosophies as Barriers to School
Reform. *Science Educator*, 5, 1.

- Morse, J. M. (1998). Designing Funded Qualitative Research. In Denzin, N. K. & Lincoln, Y. S. (Eds.) *Strategies of Qualitative Inquiry*. Thousand Oaks California: Sage Publications, Inc.
- Myers M, D. (1999). *Qualitative Research in Information Systems*. Retrieved April, 27, 1999. [wysiwyg://17http://www.auckland.ac.nz/miss/isworld/index.htm](http://www.auckland.ac.nz/miss/isworld/index.htm)
- Neuhaus, F. (1998) *Addressing Teacher Needs in Educational Reform*. Retrieved February, 16, 2003. <http://www2.edfac.usyd.edu.au/archived%20conferences/conferences98>
- Orban, D. (1975). *What is Art All About?* Sydney: Hicks Smith & Sons.
- Ozick, C. (1980). *Metaphor and Memory*. New York: Vintage Books.
- Peterson, P.L., McCarthy, S. J. & Elmore, R. E. (1996) Learning from school restructuring. *American Educational Research Journal*, 33, 1.
- Peshkin, A. (2000). The Nature of Interpretation in Qualitative Research. *Educational Researcher*, 29, 9.
- Picon, G. (1977). *Surrealism 1919-1939*. Geneva: Skira.
- Pierre, J. (1971). *Surrealist Painting 1940-1970*. Paris: Fernand Hazan. Plant, D. (2002). *Johannes Kepler and the Music of the Spheres*. Retrieved April, 4, 2003. <http://www.astrology-world.com/kepler.html>
- Polkinghorne, D. E. (1997). Reporting Qualitative Research as Practice. In Tierney, W, G. & Lincoln, Y. S. (Eds.). *Representation and the Text: Re-framing The Narrative Voice*. Albany, NY: State University of New York Press.

- Poole, M. (1980). *Creativity Across the Curriculum*.
Sydney: George Allen & Unwin.
- Popper, K. (1959). *The Logic of Scientific Discovery*. New York: Harper.
- Powell, R. R. & Chandler, C. (2002). *Relational Ways of Knowing in Middle School: A Case Report of Conversation in the Discovery Team*. Research in Middle Education Online. Retrieved May, 5, 2003.
<http://www.nmsa.org/research/rmle/rmle/rmle/>
- Pratchett, T. (2002). *Thief of Time*. London: Doubleday.
- Pugh, R. & Yaxley, B. (1999). Visioning the Middle School, The Way Forward-Giving Voice to What We Do. Unpublished Paper.
- Rhodes, W. C. (1996). From my Either/Or to My Both/And World. In Hesthusius, L. & Ballard, K. (Eds.) (1996). *From Positivism To Interpretivism and Beyond: Tales of Transformation in Educational and Social Research*.
New York: Teachers College Press.
- Richardson, L. (1998). Writing a Method of Inquiry. In Denzin, N. K. & Lincoln, Y, S. (Eds.) (1998). *Handbook of Qualitative Research*.
Thousand Oaks, California: Sage Publications Inc.
- Richardson, T, L. (2002). *The Importance of Emotional Intelligence During Transition into Middle School*. Retrieved July, 30, 2002.
<http://www.nmsa.org/research/ressum4.htm>.
- Salner, M. (1999). Self-Deception in Qualitative Research: Validity Issues. Occasional paper .University of Illinois at Springfield.

- Sankaran, S. (1997). *Memos to myself: A Tool to Improve Reflection During an Action Research Project*. Action Research Electronic Reader. University of Sydney. Retrieved February, 5, 2000.
<http://www.bens.ccns.usyd.edu.au/arrow/reader/rsnankar.com>
- Schneede, U. W. (1973). *Surrealism*. New York: Harry N Abrams, Inc.
- Sleeter, C. E. (2000). Epistemological Diversity in Research on Pre-service Teacher Preparation for Historically Underserved Children. In Secada, W, G. (Ed.) (2000). *Review of Research in Education*, 25.
 Washington. D.C.: American Educational Research Association.
- Sinclair, K. (1992). Morale, Satisfaction and Stress in Schools. In Turney, C. Hatton, N. Laws, Sinclair, K. & Smith, D. (1992). *The School Manager*.
 Crow's Nest, Sydney: Allen and Unwin.
- Staessens, K. (1993). Identificand Description of Professional Culture in Innovative Schools. *Qualitative Studies in Education*, 6, 2.
- Sterne, L. (2003 edition.) *The life and Opinions of Tristram Shandy, Gentleman*.
 New York: Penguin.
- Taylor, P, C. & Settelmaier, E. (2003) Critical Autobiographical Research for Science Educators. Curtin University of Technology.
<http://pctaylor.smec.curtin.edu>. Retrieved 19.1.2004.
- Tyack, D. & Tobin, W. (1994). The 'Grammar' of Schooling: Why it has
 Been so Hard to Change? *American Educational Research Journal*, 31, 3.
- van Tulder, M., van der Vegt, R. & Veenman, S. (1993).
 In-service Education in Innovative Schools: A Multi-case Study.
Qualitative Studies in Education, 6, 2.

- Venville, G. J. Wallace, J. Rennie, L. J. & Malone, J. A. (2001). Curriculum Integration: Eroding the High Ground of Science as a School Subject? Paper presented at the Annual Conference of the Australian Association for Educational Research in Education, Fremantle: W.A.
- Vines, H. (2002). Caught in the Middle. *Australian Educator*, 36.
- Wallace, J. & Loudén, W. (1994) Collaboration and the Growth of Teachers' Knowledge. *Qualitative Studies in Education*, 6, 2.
- Ware, M. (1997). Belgian Assortment. *The Automobile*, 15, 7.
- Watts, J. (1999). *A Synopsis of Some Literature on Professionalism, Change and Effectiveness*. Retrieved, February, 16, 2003.
<http://www.leadership.sa.edu.au/papers/professionalism.htm>
- Wheatly, M. (1992). *Leadership and the new science: learning about organization from an orderly universe*. San Francisco: Berrett-Koehler Publishers, Inc.
- Whitfield, S. (1992). *Magritte*. Brussels: Ludion.
- Williamson, D. (1980). *Travelling North*. Redfern, N.S.W: Currency Press.
- Wubbels, T. (1993). Teacher-Student Relationships in Science and Mathematics Classes. *What Research Says to the Science and Mathematics Teacher*, 11.

Appendix 1.

THE SURVEY INSTRUMENT.

What Happened in This Class?

This is a retrospective survey about what you remember school was like when you were in grade seven. Where the survey refers to “the class” it means the Home Group and the subjects you had with your Home Group teacher.

Where the survey refers to the “teacher”, it means your Home Group Teacher.

DIRECTIONS

This questionnaire contains statements about practices which took place in this class. You will be asked how often each practice took place.

There are no ‘right’ or ‘wrong’ answers. **Your opinion is what is wanted.**

Think about how well each statement describes what this class was like for you.

Draw a circle around

1	if the practice took place	Almost Never
2	if the practice took place	Seldom
3	if the practice took place	Sometimes
4	if the practice took place	Often
5	if the practice took place	Almost Always

Be sure to give an answer for all questions. If you change your mind about an answer, just cross it out and circle another.

Some statements in this questionnaire are fairly similar to other statements. Don’t worry about this. Simply give your opinion about all statements.

The final sheet asks for your general comments this could be a written paragraph, dot points or any other form that suits you.

PRACTICE EXAMPLE

Suppose that you were given the statement: “I chose my partners for group discussion.” You would need to decide whether you think **you** chose your partners ‘Almost Never’, ‘Seldom’, ‘Sometimes’, ‘Often’ or ‘Almost Always’. For example, if you selected ‘Often’, you would circle the number 4 on your questionnaire.

Your Initials.

Male ☐ Female ☐

This survey is a modification of classroom environment measurement instrument developed by Fraser, Fisher & McRobie. (1996).

What would you have liked to have happened in this class?

This is a retrospective survey about what you remember school was like when you were in grade seven. Where the survey refers to “the class” it means the Home Group and the subjects you had with your Home Group teacher.

Where the survey refers to the “teacher”, it means your Home Group Teacher.

DIRECTIONS

This questionnaire contains statements about practices that you would have liked to have happened in this class. You will be asked how often you would have preferred each practice to occur.

There are no ‘right’ or ‘wrong’ answers. **Your opinion is what is wanted.**

Think about how well each statement describes what this class was like for you.

Draw a circle around

- | | | |
|---|----------------------------|----------------------|
| 1 | if the practice took place | Almost Never |
| 2 | if the practice took place | Seldom |
| 3 | if the practice took place | Sometimes |
| 4 | if the practice took place | Often |
| 5 | if the practice took place | Almost Always |

Be sure to give an answer for all questions. If you change your mind about an answer, just cross it out and circle another.

Some statements in this questionnaire are fairly similar to other statements. Don’t worry about this. Simply give your opinion about all statements.

The final sheet asks for your general comments this could be a written paragraph, dot points, or any other form that suits you.

Your Initials:

Male ☐

Female ☐

Class Group One Analysis Sheet

What Happened in This Class?

SC	Almost Never	Seldom	Some- times	Often	Almost Always
1. I made friendships among students in this class.	1	1	8	11	3
2. I knew other students in this class.	2	0	5	6	11
3. I was friendly to members of this class.	0	0	6	10	12
4. Members of the class were my friends	1	0	4	13	6
5. I worked well with other class members..	2	0	5	12	4
6. I helped other class members who were having trouble with their work.	4	4	10	3	1
7. Students in this class liked me..	0	1	10	8	3
8. In this class I got help from other students.	4	3	8	6	1
TS	Almost Never	Seldom	Some- times	Often	Almost Always
9. The teacher took a personal interest in me.	1	3	14	5	0
10. The teacher went out of their way to help me.	1	2	13	7	1
11. The teacher considered my feelings.	4	2	11	5	2
12. The teacher helped me when I had trouble with the work.	0	2	4	9	9
13. The teacher talked to me.	0	0	12	7	5
14. The teacher was interested in my problems.	3	5	10	4	2
15. The teacher moved about the class to talk to me.	3	2	13	3	3
16. The teacher's questions helped me to understand.	2	1	11	6	3
IN	Almost Never	Seldom	Some- times	Often	Almost Always
17. I discussed ideas in class	5	4	8	4	3
18. I gave my opinions during class discussions.	3	7	6	6	2
19. The teacher asked me questions.	0	4	12	6	2
20. My ideas and suggestions were used during classroom discussions.	5	6	9	3	1
21. I asked the teacher questions.	0	4	10	7	3
22. I explained my ideas to other students.	1	6	11	6	1
23. Students discussed with me how to go about solving problems.	1	5	12	4	2
24. I was asked to explain how I solve problems.	3	4	12	3	2
IN	Almost Never	Seldom	Some- times	Often	Almost Always
25. I carried out investigations to test my ideas.	3	8	9	2	1
26. I was asked to think about the evidence for statements.	2	5	8	6	2
27. I carried out investigations to answer questions coming from discussions.	2	5	12	3	2
28. I explained the meaning of statements,	2	2	12	6	1

29.	I carried out investigations to answer questions which puzzled me.	4	3	13	3	3
30.	I carried out investigations to answer the teacher's questions.	0	5	13	3	3
31.	I found out answers to questions by doing investigations.	2	3	11	5	3
32.	I solved problems by using information obtained from my own investigations.	2	2	10	5	5

TO		Almost Never	Seldom	Some- times	Often	Almost Always
33.	Getting a certain amount of work done was important to me.	1	0	6	8	9
34.	I did as much as I set out to do.	2	1	10	7	4
35.	I knew the goals for this class.	0	5	4	7	7
36.	I was ready to start this class on time.	1	3	3	6	10
37.	I knew what I was trying to accomplish in this class.	1	2	8	9	4
38.	I paid attention during this class.	1	1	4	8	10
39.	I tried to understand the work in this class.	0	1	2	7	14
40.	I knew how much work I had to do.	0	0	4	8	12
CO		Almost Never	Seldom	Some- times	Often	Almost Always
41.	I co-operated with other students when doing assignment work.	2	1	8	3	10
42.	I shared my books and resources with other students when doing assignments.	4	0	5	11	4
43.	When I worked in groups in this class, there was teamwork.	2	1	3	12	6
44.	I worked with other students on projects in this class.	1	0	8	13	3
45.	I learned from other students in this class.	2	0	11	10	2
46.	I worked with other students in the class.	2	1	7	12	3
47.	I co-operated with other students on class activities.	3	0	6	11	5
48.	Students worked with me to achieve class goals.	2	3	8	10	2
EQ		Almost Never	Seldom	Some- times	Often	Almost Always
49.	The teacher gave as much attention to my questions as to other students' questions.	1	3	4	6	10
50.	I got the same amount of help from the teacher as other students.	1	2	5	9	7
51.	I had the same amount of say in this class as other students.	2	0	7	7	8
52.	I was treated the same as other students in this class.	1	2	1	8	12
53.	I received the same encouragement from the teacher as other students did.	1	0	5	6	12
54.	I got the same opportunity to contribute to class discussions as other students.	1	1	2	11	9

55.	My work received as much praise as other students' work.	2	4	4	9	5
56.	I got the same opportunity to answer questions as other students.	1	1	6	7	9

Analysis Sheet

What would you have liked to happen in this class?

1.	I would have made friends with students in this class.	0	0	1	12	11
2.	I would have known other students in this class.	0	1	4	6	13
3.	I would have been friendly to members of this class.	1	0	1	10	12
4.	Members of this class would have been my friends	0	0	3	8	13
5.	I would have worked well with other class members..	1	0	2	9	12
6.	I would have helped other class members who were having trouble with their work.	2	1	1	11	9
7.	Students in this class would have liked me.	0	0	5	7	11
8.	In this class I would have got help from other students.	1	0	3	10	10
TS		Almost Never	Seldom	Some- times	Often	Almost Always
9.	The teacher would have taken personal interest in me.	2	0	8	9	5
10.	The teacher would have gone of their way to help me.	0	0	14	3	7
11.	The teacher would have considered my feelings.	1	1	6	14	7
12.	The teacher would have helped me when I had trouble with the work.	0	0	4	6	14
13.	The teacher would have talked to me.	0	1	4	14	5
14.	The teacher would have been interested in my problems.	1	1	12	10	5
15.	The teacher would have moved about the class to talk to me.	1	1	9	10	3
16.	The teacher's questions would have helped me to understand.	1	0	6	8	9
IN		Almost Never	Seldom	Some- times	Often	Almost Always
17.	I would have discussed ideas in class	1	2	3	14	4
18.	I could have stated my opinions during class discussions.	1	0	4	12	7
19.	The teacher would have asked me questions.	1	1	12	7	3
20.	My ideas and suggestions would have been used during classroom discussions.	1	1	11	8	3

21.	I would have asked the teacher questions.	1	0	3	13	7
22.	I would have explained my ideas to other students.	1	0	13	10	5
23.	Students would have discussed with me how to go about solving problems.	1	1	7	11	4
24.	I would have been asked to explain how I solve problems.	2	2	11	7	2
IN		Almost Never	Seldom	Some- times	Often	Almost Always
25.	I would have carried out investigations to test my ideas.	1	3	10	6	4
26.	I would have been asked to think about the evidence for statements.	1	1	8	9	5
27.	I would have carried out investigations to answer questions coming from discussions.	1	1	9	8	5
28.	I would have explained the meaning of statements, diagrams and graphs.	2	1	8	10	3
29.	I would have carried out investigations to answer questions which puzzled me.	2	1	8	8	5
30.	I would have carried out investigations to answer the teacher's questions.	0	1	11	8	4
31.	I would have found the answers to questions by doing investigations.	1	0	10	7	6
32.	I would have solved problems by using information obtained from my own investigations.	2	1	5	10	6

TO		Almost Never	Seldom	Some- times	Often	Almost Always
33.	Getting a certain amount of work done would have been important to me.	0	0	2	9	13
34.	I would have done as much as I set out to do.	0	1	5	5	12
35.	I would have known the goals for this class.	0	2	3	4	14
36.	I would have been ready to start this class on time.	0	0	3	5	15
37.	I would have known what I was trying to accomplish in this class.	0	0	5	6	12
38.	I would have paid attention during this class.	0	0	2	7	15
39.	I would have tried to understand the work in this class.	0	0	2	5	16
40.	I would have known how much work I had to do.	0	0	3	4	14
CO		Almost Never	Seldom	Some- times	Often	Almost Always
41.	I would have co-operated with other students when doing assignment work.	0	0	4	7	12
42.	I would have shared my books and resources with other students when doing assignments.	0	0	8	11	3
43.	When I worked in groups in this class, there would have been teamwork.	0	1	4	8	10

44.	I would have worked with other students on projects in this class.	0	0	8	8	6
45.	I would have learned from other students in this class.	0	0	8	11	4
46.	I would have worked with other students in the class.	0	1	4	11	7
47.	I would have co-operated with other students on class activities.	0	0	3	9	11
48.	Students would have worked with me to achieve class goals.	0	1	4	8	10
EQ		Almost Never	Seldom	Some- times	Often	Almost Always
49.	The teacher would have given as much attention to my questions as to other students' questions.	0	0	3	7	13
50.	I would have got the same amount of help from the teacher as other students.	0	1	1	6	15
51.	I would have had the same amount of say in this class as other students.	0	1	2	8	12
52.	I would have been treated the same as other students in this class.	0	0	2	7	14
53.	I would have got the same encouragement from the teacher as other students.	0	0	2	6	15
54.	I would have got the same opportunity to contribute to class discussions as other students.	0	1	1	5	16
55.	My work would have received as much praise as other students' work.	0	1	2	6	13
56.	I would have had the same opportunity to answer questions as other students.	0	0	2	7	14

Class Group Two Analysis sheet

What Happened in This Class?

SC	Almost Never	Seldom	Some- times	Often	Almost Always
1. I made friendships among students in this class.	2	1	1	12	9
2. I knew other students in this class.	0	0	6	1	18
3. I was friendly to members of this class.	0	0	2	16	8
4. Members of the class were my friends	0	0	2	12	11
5. I worked well with other class members.	0	0	5	15	6
6. I helped other class members who were having trouble with their work.	1	3	14	6	2
7. Students in this class liked me..	1	0	9	13	3
8. In this class I got help from other students.	1	2	11	6	4
TS	Almost Never	Seldom	Some- times	Often	Almost Always
9. The teacher took a personal interest in me.	1	1	20	4	0
10. The teacher went out of their way to help me.	1	2	9	9	5
11. The teacher considered my feelings.	1	1	9	13	2
12. The teacher helped me when I had trouble with the work.	0	2	4	10	10
13. The teacher talked to me.	0	1	7	7	11
14. The teacher was interested in my problems.	0	2	7	9	8
15. The teacher moved about the class to talk to me.	0	1	12	7	6
16. The teacher's questions helped me to understand.	0	0	8	14	4
IN	Almost Never	Seldom	Some- times	Often	Almost Always
17. I discussed ideas in class	1	1	10	8	6
18. I gave my opinions during class discussions.	2	5	11	5	3
19. The teacher asked me questions.	1	2	13	6	2
20. My ideas and suggestions were used during classroom discussions.	0	7	154	04	0
21. I asked the teacher questions.	0	2	7	11	6
22. I explained my ideas to other students.	0	1	12	11	2
23. Students discussed with me how to go about solving problems.	0	6	7	11	2
24. I was asked to explain how I solve problems.	2	8	6	9	1
IN	Almost Never	Seldom	Some- times	Often	Almost Always
25. I carried out investigations to test my ideas.	1	8	10	6	1
26. I was asked to think about the evidence for statements.	2	6	11	5	2
27. I carried out investigations to answer questions coming from discussions.	2	5	13	4	1
28. I explained the meaning of statements, diagrams and graphs.	2	3	9	12	0
29. I carried out investigations to answer	2	6	9	7	2

	questions which puzzled me.					
30.	I carried out investigations to answer the teacher's questions.	2	6	11	5	2
31.	I found out answers to questions by doing investigations.	2	2	9	11	2
32.	I solved problems by using information obtained from my own investigations.	1	3	8	10	4

TO		Almost Never	Seldom	Some- times	Often	Almost Always
33.	Getting a certain amount of work done was important to me.	0	0	5	10	19
34.	I did as much as I set out to do.	0	0	8	11	5
35.	I knew the goals for this class.	0	1	2	14	7
36.	I was ready to start this class on time.	1	1	8	5	9
37.	I knew what I was trying to accomplish in this class.	0	1	5	11	7
38.	I paid attention during this class.	0	0	8	13	3
39.	I tried to understand the work in this class.	0	0	1	12	10
40.	I knew how much work I had to do.	1	0	2	9	9
CO		Almost Never	Seldom	Some- times	Often	Almost Always
41.	I co-operated with other students when doing assignment work.	1	1	4	10	7
42.	I shared my books and resources with other students when doing assignments.	1	1	7	11	3
43.	When I worked in groups in this class, there was teamwork.	0	1	2	12	8
44.	I worked with other students on projects in this class.	2	0	3	10	7
45.	I learned from other students in this class.	0	0	10	10	3
46.	I worked with other students in the class.	1	1	6	11	5
47.	I co-operated with other students on class activities.	0	0	6	13	4
48.	Students worked with me to achieve class goals.	0	0	11	10	2
EQ		Almost Never	Seldom	Some- times	Often	Almost Always
49.	The teacher gave as much attention to my questions as to other students' questions.	0	0	6	9	8
50.	I got the same amount of help from the teacher as other students.	1	2	8	3	9
51.	I had the same amount of say in this class as other students.	0	2	4	9	8
52.	I was treated the same as other students in this class.	0	2	2	7	12
53.	I received the same encouragement from the teacher as other students did.	0	0	4	9	8
54.	I got the same opportunity to contribute to class discussions as other students.	0	0	4	9	9
55.	My work received as much praise as other students' work.	1	1	4	5	12

56.	I got the same opportunity to answer questions as other students.	0	0	6	9	8
-----	---	---	---	---	---	---

Analysis Sheet

What would you have liked to have happened in this class?

SC		Almost Never	Seldom	Some- times	Often	Almost Always
1.	I would have made friends with students in this class.	1	0	4	7	14
2.	I would have known other students in this class.	1	0	2	10	13
3.	I would have been friendly to members of this class.	1	0	0	11	11
4.	Members of this class would have been my friends	1	0	7	9	10
5.	I would have worked well with other class members.	1	1	3	5	15
6.	I would have helped other class members who were having trouble with their work.	1	2	7	11	4
7.	Students in this class would have liked me.	0	2	3	14	6
8.	In this class I would have got help from other students.	1	0	5	11	8
TS		Almost Never	Seldom	Some- times	Often	Almost Always
9.	The teacher would have taken personal interest in me.	1	1	19	3	2
10.	The teacher would have gone of their way to help me.	1	1	15	7	2
11.	The teacher would have considered my feelings.	1	1	8	12	4
12.	The teacher would have helped me when I had trouble with the work.	1	0	10	8	7
13.	The teacher would have talked to me.	1	1	11	10	3
14.	The teacher would have been interested in my problems.	1	2	11	6	6
15.	The teacher would have moved about the class to talk to me.	1	0	14	7	4
16.	The teacher's questions would have helped me to understand.	1	0	4	11	10
IN		Almost Never	Seldom	Some- times	Often	Almost Always
17.	I would have discussed ideas in class	1	0	11	11	3
18.	I could have stated my opinions during class discussions.	1	1	13	6	5
19.	The teacher would have asked me questions.	0	3	15	3	5
20.	My ideas and suggestions would have been used during classroom discussions.	0	1	17	3	5
21.	I would have asked the teacher questions.	0	2	10	10	4
22.	I would have explained my ideas to other students.	1	1	17	5	2
23.	Students would have discussed with me how	1	1	12	11	1

24.	to go about solving problems. I would have been asked to explain how I solve problems.	0	4	14	7	1
IN		Almost Never	Seldom	Some- times	Often	Almost Always
25.	I would have carried out investigations to test my ideas.	0	3	11	9	3
26.	I would have been asked to think about the evidence for statements.	0	5	13	5	3
27.	I would have carried out investigations to answer questions coming from discussions.	1	3	12	9	7
28.	I would have explained the meaning of statements, diagrams and graphs.	0	6	8	8	2
29.	I would have carried out investigations to answer questions which puzzled me.	0	3	7	14	2
30.	I would have carried out investigations to answer the teacher's questions.	0	5	10	8	3
31.	I would have found the answers to questions by doing investigations.	0	2	8	13	3
32.	I would have solved problems by using information obtained from my own investigations.	0	4	8	11	3
TO		Almost Never	Seldom	Some- times	Often	Almost Always
33.	Getting a certain amount of work done would have been important to me.	1	0	2	8	13
34.	I would have done as much as I set out to do.	0	0	3	4	16
35.	I would have known the goals for this class.	0	0	2	5	15
36.	I would have been ready to start this class on time.	0	0	3	9	11
37.	I would have known what I was trying to accomplish in this class.	0	0	4	5	13
38.	I would have paid attention during this class.	1	0	1	15	8
39.	I would have tried to understand the work in this class.	0	0	2	7	13
40.	I would have known how much work I had to do.	1		1	5	15
CO						
41.	I would have co-operated with other students when doing assignment work.	1	0	6	9	7
42.	I would have shared my books and resources with other students when doing assignments.	2	0	10	7	4
43.	When I worked in groups in this class, there would have been teamwork.	0	0	4	8	11
44.	I would have worked with other students on projects in this class.	0	0	7	8	9
45.	I would have learned from other students in this class.	0	0	5	14	4
46.	I would have worked with other students in the class.	1	0	4	13	6
47.	I would have cooperated with other students	1	0	10	6	6

	on class activities.					
48.	Students would have worked with me to achieve class goals.	1	0	8	10	4
EQ		Almost Never	Seldom	Some- times	Often	Almost Always
49.	The teacher would have given as much attention to my questions as to other students' questions.	0	0	8	7	8
50.	I would have got the same amount of help from the teacher as other students.	1	0	4	8	9
51.	I would have had the same amount of say in this class as other students.	0	0	7	3	13
52.	I would have been treated the same as other students in this class.	1	0	4	7	11
53.	I would have got the same encouragement from the teacher as other students.	0	0	6	8	9
54.	I would have got the same opportunity to contribute to class discussions as other students.	0	2	5	7	9
55.	My work would have received as much praise as other students' work.	0	1	8	3	11
56.	I would have had the same opportunity to answer questions as other students.	1	1	6	5	10

Appendix 2.

A Selection of Transcripts of Conversations with Teachers.

Richard

Gary. "Could I first ask you when you first became interested in middle schooling."

Richard. "I hadn't really been exposed to the idea at all but I was aware that a number of schools had middle schools and were in the process of setting them up. And, I was asked by the Principal whether I would like to go to a Conference. That Conference was run by the National Schools Network. The Conference was basically on middle schooling and I said "yes, I will give it a go" because he had mentioned something about they were thinking about setting up a middle school in the future, so I went with a couple of colleagues. That was really quite an inspiring Conference and I guess the main focus of that was trying to get away from the traditional method of educating, particularly grades 7's and 8's and to really have a reformed process in the school to allow a middle school approach to take place.

So I came back from that Conference saying 'yes, this is really good stuff, this is what we need.' I realized that the way things were being done was basically the same way things were done in the 1950's, and it was a great opportunity to do something about it. Then, under the influence of one of the assistant principals, obviously there was a big push to get this program going. I guess there were a few ad hoc plans being made, in which teachers were interested in being involved and so on. There were a couple of meetings. In fact I remember giving a Professional Development session to staff about what the Conference was all about. It was perceived that there was a need to try to re-educate a number of teachers at the school to start thinking a little bit differently about how we educate the younger grades.

It was certainly recognised by me and a few others that we had to get the ball rolling, early on in order to get it in place, up and running for the next year. There were concerns by about mid year '97, well things had just been left to the last minute and there was a sense of 'if we don't really do something serious about it, it is going to

not operate.’ Now whether this was caused by certain people who were responsible for the timetable and structure of how the school was run, I’m not sure.”

Gary. *“Do you think that it might have been too difficult at the time, for some?”*

Richard. “Well, it did require some creative solutions; one of the issues of the Conference was whether you sort of do it on a gradual basis or whether you just go straight into changing the infrastructure and so on. My feeling at the time I think was that we needed to do it straight away because of the nature of the school’s staff that any sort of slow progress would possibly not work.”

Gary. *“Was that because they would need time to get used to it?”*

Richard. “Yes In the middle of the year there was certainly a degree of frustration, but also excitement that it was going ahead and then later I was asked to try to come up with a timetable for how the middle school might operate. So I came up with a draft timetable which implemented all the things that certainly we wanted to have in it in terms of the teachers, the negotiated time and the fact that the middle school should be able to operate independently of the rest of the school. That for me was really exciting because I thought this is what it is all about. We can actually do some real educating along the lines that we have been discussing. I was really encouraged by that so I suppose, late third term there was a sense of starting on a new venture. The teachers that were going to be working on it were working well together and were full of enthusiasm.”

Gary. *“That’s basically is where I became involved. I was still working mostly in the Tech Department but the Principal said, ‘look we don’t want you to do this next year at all, we want you to be the new Grade 7 coordinator.’ This was a bit late in the process to get involved. Initially I was in the dark really about where it was coming from.”*

Richard. “So, I think the year finished up with a fair degree of frustration because things weren’t still firmly in place to determine how the whole thing was going to operate. So the following year started with the same degree of confusion and frustration but I think the participants in the middle school program were sufficiently keen and had a strong belief in how the whole thing would operate and managed to

get through those uncertain months at the start of the year and begin to implement in some effective programs.”

Gary. *“That would be my observation. Basically I started the year assuming I was actually going to have a Grade 7 class for Humanities and Art, and at the last minute was told, ‘no we can’t do that, we have got too many Grade 10 classes who don’t have a teacher.’ That’s what I found really peculiar it was like we want you to be the Grade 7 Team Leader but we also need you to teach these Grade 9 and 10 classes, and another staff member, who wasn’t really particularly interested in the Middle School, was told that he was going to have to take the class that I was going to get. So that was a really odd start for me, I found that quite difficult. I guess that’s just indicative of those things you talked about, the loose ends. Somebody hadn’t really done the timetable carefully enough, or maybe they had, perhaps there always was going to be a problem but it was not dealt with until the last minute. That’s a possibility.”*

Richard. “I think there was recognition that, by some senior staff, that there was going to be a problem with staffing some of the senior classes. We would have to remove teachers from the senior classes to work in the middle school. And they thought well, ‘we can’t have this, we have got all these effective and experienced teachers in the Middle School and we have got all these grade nine and ten classes that need a teacher in front of them.’ It meant that they would have to use teachers that weren’t particularly skilled for the senior classes.”

Gary. *“That was the real issue, wasn’t it?”*

Richard. “So this middle school thing was a dreadful thing because of it disrupting the senior classes.”

Gary. *“I have heard that argument run on a number of occasions and I thought if I had been one of the staff that they said couldn’t trust with a grades nine or ten class then, I would be quite hurt and offended. I think it was a bit of an indictment of a subject department to claim that you cannot use teacher ‘X’ as a Middle School*

teacher because there is nobody else in the department that can successfully teach the more challenging students. I thought that was a bit strange, yes. ”

Richard. “I think there was a beginning of a feeling in the first term, that there were some problems with the middle school or continuing with the model because of staff resource difficulties”.

G.G. *“Actually that is a good point, we will see if we can change tack now, change gear if you like. What was it actually like, is a question I would like to know, I guess.”*

Richard. “All right.”

Gary. *“I think I would like to get towards that now.”*

Richard. “Yes, I think all the teachers have tried to put into practice some of the philosophy that was being discussed at the professional seminars and workshops.”

Gary. *“I would go along with that.”*

Richard. “And, I guess we did think it was a bit of a joke at times, particularly the language they were using. But I think deep down, seriously, we knew that it was a desirable option. I guess there was also maybe some degree of resentment by other staff that the Middle School teachers were going out all the time and being offered professional development. And then there was perhaps the sense of reluctance by teachers to actually go up and see what we were doing because, perhaps they might have been worried that they would find it interesting and relevant.”

Gary. *“Yes, I would take them up there, people like department heads, and only then would they acknowledge that there was first class Science or whatever, going on.”*

Richard. “So there was almost a sense of fear that they would actually see things they deep down they really knew was going o.k. That the education was sound and that maybe they would actually some limitations in their own teaching programs.”

Gary. *“I agree. That’s an interesting phenomenon that. I’ve heard it described as a ‘fear of success.’ It means that if you happen to succeed at something challenging and difficult then you will probably be expected to do even more or at least keep operating at that level.”*

Richard. “Yes a sort of if I don’t see it, I won’t need to know about it. But the kids that were in that Grade 7 year really adapted well to the program. We certainly had positive comments from parents, particularly in the first interview sessions after the release of reports.”

Gary. “Yes and heaps of them too, all extremely thrilled about it. I often got complimentary phone calls about the supportive environment.”

Richard. “It was very positive, from parents. There was of course concern, particularly from other teachers, that they couldn’t do, for example, science when not in a science lab. ‘How could you be teaching science if you are not in a science lab?’ That was a source of continuing frustration, and some amusement for us within the school, it is still present to today.”

Gary. *“That will just become part of school folklore unfortunately.”*

Richard. “Yes it’s as though you have got to be toying with a Bunsen burner to be doing real science.”

Gary. *“And sort of walking along the beach or interviewing the general population about environmental issues isn’t.”*

Richard. “Indeed, and so, the major frustrations were to do with a lack of resources. I think some teachers felt a degree of alienation from the rest of the staff.”

Gary. *“One thing I did find, which you don’t normally do in the role of a grade coordinator, was the importance of staff counselling. I thought it was good really. I thought it actually enhanced the role of the grade coordinator. I find now that I’ve old square one, being mostly the person who deals with the naughty kids. I enjoyed*

Grade 7, I was able to spend time working with staff as well as students. I think we stopped a lot of the problems before they started too.”

Richard. “We got very few discipline problems at that stage, and we were certainly contributing that to the new way of doing things.”

Gary. “I’ll tell you something else too, it is still the same with that year group, and they are a very grade. Maybe 2 or 3 kids out of 187 have problems. That’s pretty good, far better than the other senior grades.”

Richard. “Yes that’s true but we did have some real problems like the difficulties with the ‘negotiated times’ option that we were trying to run.”

Gary. “I agree, that was a good idea which never really managed to get off the ground.”

Richard. “I can’t quite remember what happened to it in the end.”

Gary. “I think it was a lack of resources in the end. Everybody could see it was a brilliant idea all you needed was, like, one more extra member of staff to be available at that time, to give the flexibility that you needed, so you could actually cater for small group of 10 or so kids somewhere and then disperse the others amongst the existing staff. We never got the extra person, so it was always going to be a difficult numbers game. When somebody did have 10 students it meant that somebody else probably had forty or so. I actually thought it was a good idea.”

Richard. “Yes, the fact that you could, in theory, take classes out of school into the real world without having to give notice that such and such was going on an excursion etc. That we were potentially free to do all that, and we had, to some extent, our own budget to enable those sorts of things to happen.”

Gary. “That was one of the resources we were provided with that year. It was a new idea for the school, the concept that a grade rather than a subject department could

have a budget. By getting those funds for curriculum development we were able to use them to buy extra 'goodies' for the kids, it did happen."

Richard. "I think that later there was a move by others on the staff, particularly some subject heads that saw the Middle school as the cause of some of the school's problems whether it be the timetable or budgets or so on, to nip it the bud, so to speak, before it got extended elsewhere."

Gary. *"When do you think that this started?"*

Richard. "About third term in the first year."

Gary. *"Yeah, right I didn't pick it then. I certainly picked it later when we were getting to Grade 8."*

Richard. "Of course the concept of team teaching had disappeared by then."

Gary. *"For reasons of expediency, gaps in the timetable had to be covered so classes had bits and pieces of teachers."*

Richard. "And as a result we couldn't really have a totally integrated curriculum like we did have in the first year."

Gary. *"Look I'm conscious that we have been talking a lot longer than we thought. Just briefly, not in any formal way, could you tell me what would you have liked it to have been like?"*

Richard. "Yes, but it should have always been looked at as a two year plan, not a one year plan, so the teachers could have been working together for a longer time with the same group. I picked up a different class in the second year and found that really difficult despite it being a fairly 'easy' class to teach. I had never seen a Middle School actually working so I needed time to figure it out, perhaps a couple of extra lessons off to start with to get my thoughts organized. It was a pretty heavy load for something that was new."

Gary. *“That’s interesting because you mentioned that in your comments about what you expected the experience to have been like. I was asked by the Principal to indicate the sorts of things we would need, because I had done this sort of stuff in another school, and my strongest recommendation was to allocate one period of non-contact time where the team were all off together at least once a week if not twice a week. I thought that was more important than which room you got, resources and computers and all that other stuff, and in the end that was the one thing the timetable couldn’t deliver on, that was crazy.”*

Richard. “I think another problem was that we had, I think it was, three different Principals over the time we were trying to develop this program, the one who wanted it and started the process, then an Acting Principal and then the new Principal and I don’t really know what he thinks.”

Gary. *“So what would you have liked to happen, given that there were always going to be some restraints?”*

Richard. “Well, I would have liked to have seen the school give a commitment of five years to get the Middle School going the way that we wanted it to go. They never really gave it a genuine go. We weren’t going to get it exactly right in the first year, perhaps not even in the second, but by the third everything should have been running very smoothly and fine tuned.”

Gary. *“Actually I would be more positive. I think we were scratching at it even in the first year, I really do. I think the principal got a really good deal as I believe that this school had made more progress in two years than my previous school had managed to achieve in four or five. I sort of know this to be true as I was very involved with the Humanities / Science program and found that I was able to do some of the things I wished I had been able to do before but never had the opportunity. So I reckon they got more than they should have expected to be honest.”*

Richard. “Yes given the short time-frame they allowed it.”

Gary. *"It was sort of 'Get it right first time around or not at all'. I'm interested in your comments about the time-frame, for example how would you resolve that issue of time and resources?"*

Richard. "I think it's so hard to make significant changes in schools. There are too many people who have vested interests in their own little areas of the school it has to be a whole school thing. To establish an effective Middle School they have to give you a dedicated group of teachers who are not compromised by having essential timetable requirements outside of the Middle School area and the conflicts of interest that occur as a result of that."

Gary. *"Of course in an ideal world you would give them their own staff and budget."*

Richard. "I guess there's also the issue of well it's like stealing money from other parts of the school where it could have been used, other budget managers see it as a threat and resist the new program."

Gary. *"I guess that is always going to be the case as the harsh reality is that overall school budgets are so inadequate that resources become a major issue and can dominate the decision making process."*

Richard. "In some respects the school lost an opportunity to demonstrate and put into practice that it was a school that had a vision and the capacity to implement that vision. It had been floundering around there a bit for a few years and could have developed a reputation for the excellence of its Middle School. The international school is now seen as the icon particularly as it brings in lots of fees, perhaps we should have charged the kids to enroll in the Middle School?!" There's no doubt that the staff involved in the development of the Middle School put in a lot to make sure that it at least got as far as it did. But when it was clear that the program was being undermined the amount of effort required to just keep things going things became too hard and a feeling of disenchantment started to develop."

Gary. *“Can I ask you a question because you have been involved in this far more than I have before, during, after etc, is the fundamental philosophy still alive in the current grade seven?”*

Richard. “The basic beliefs are still there, but that’s about it, the teachers that teach in grade seven now are still trying to put into practice some of the philosophy behind the program.”

Gary. *“Do you think that the program could be revived? Some sort of boost or pat on the back some sort of gesture that acknowledges the progress made? I never really wanted it to become the only innovative program in the school. I think people misunderstood me they sort of said ‘here he goes again he’s done this before, Mr. Middle School’. I never was and I could always see the danger of Middle Schooling becoming the new conservatism if you’re not careful but despite all that I would like to think that it’s still somehow there maybe slightly dormant or hibernating but it’s still alive.”*

Richard. “I feel the same way because we’ve all been through that initial phase but I don’t think unless there’s any genuine desire further up the administration to set it motion again unless it’s seen to be advantageous to the school. What we really wanted was a grade five to eight system working with the local primary school which is practically on the same campus. There’s a huge amount of potential there for work to go on, sharing teachers and facilities, that was a pretty radical concept.”

Gary. *“I suspect that some of these things just take a little bit of an effort in a political sense as well as an educational sense.”*

Richard “It needs someone in authority who values it for a start and someone that has the energy to do something about it. Our former Assistant Principal certainly had that and a belief in it, but was continually being frustrated by other factions on the staff. ”

Gary. *“I’m a bit disappointed really because my grade eight classes were the most rewarding I’ve ever had, two grade eight classes, just stunning.”*

Christine

Gary. *“When you put your hand up to be in it, what did you anticipate would happen?”*

Christine. “Well I’ve got to start from a different point, because I didn’t volunteer, I was told I was going to be involved. However, I was aware of the concept of middle schooling; it was all happening around me and aware that there were lots of people on the staff interested in doing something in the middle schooling area. But I was sitting back, watching, seeing who was doing what, and aware that there were power plays happening around the issue. I could see that it was going to be, considering who was involved in what was going on that there would be egotistical considerations to take into account. I believed that people would put their hands up to be in it, but felt that the really basic ground work had not been done and, whether you put your hand up or not, it was still going to be a selection. Someone was going to make a choice, so I just stayed back from it. Therefore I wasn’t really involved in it, until I was told that I would be involved in middle schooling the following year and I was expected to attend the first team meeting. So I went to the meeting, saw the other staff involved and realized quickly that I had to find someone as a partner. So Richard was the obvious choice.”

Gary. *“Can you tell me why you thought that was the case?”*

Christine. “Well, I thought that Richard would be easy to get on with, and it seemed to me that the pairings had already taken place anyway. So what did I think it would be like? It was to do with the world of possibilities sort of thing, and I was thinking, this could happen, this could be really good etc.”

Gary. *“Was there anything in particular that you saw as a possibility?”*

Christine. “Well, I really liked the way the Humanities program had been developed in the school and liked the idea that you could extend this, you could take an idea and tackle it in a multi-faceted way, and that was the main appeal. I then realized, the more I thought about it, that we needed time to organize it together. I knew that things were tough but I thought that we would be given extra time; it never

happened. So for me it became a struggle to develop the ideas, I always knew that it was going to be about competing for resources and trying to meet everybody's needs but I found it very difficult, it was very problematic."

Gary. "That's interesting because, in some respects, some of the other members of the team were a bit naïve in that regard, they thought everything was going to be hunky-dory, yet you seem to have been more realistic about the difficulties."

Christine. "I don't know if that had something to do with having been a music teacher and knowing that if things were not properly prepared and coordinated, they just didn't work out very well, and if you didn't have the time it just didn't happen. So, I thought the positive thing was, after my surprise at being told that I was going to be in the team, to see what I could do with the situation as it was, and try to make it work. However, I could see from the start, that there was going to be a problem with some of the regular school staff, I could see that there were going to be difficulties with time-tabling and stuff like that, but I underestimated the degree of resistance, it became like it was the rest of the school versus the middle school."

Gary. "So what did it actually turn out like?"

Christine. "I found that I could work well with Richard and really enjoyed some of the things we did together. There were some other really good things that we started to do right at the beginning with that negotiated time, that was really good, but it was a pity that it just sort of faded out because of time-table difficulties. The biggest gains for me were the staff development sessions because at the time I was doing my Masters in Public Administration and I found that all of the managerial concepts that I had thought were administration specific could be placed into the classroom teaching context. Some of the dialogue we had I could actually match and see how it could be applied, that was very interesting for me."

Gary. "So do you think that the administrative process is the same in a classroom as it is in a corporation?"

Christine. “Yes, but it does depend on what your understanding of leadership is, and all that sort of stuff.”

Gary. “Yes, I guess in a classroom you’ve got thirty odd assorted people possibly more than you would have in a small business.”

Christine. “Exactly, so you have to decide whether you are going to apply a consultative process, how do you manage conflict resolution, even further out than that, even looking at bureaucracies and how you move through them, because schooling is bureaucratic. The trouble was that we were trying to develop appropriate organizational forms that were consistent with middle schooling and the rest of the school was still stuck with a Weber model.”

Gary. “So are you saying that we had a flexible organization that was trying to work inside a rigid one?”

Christine. “Yes, so all of these things I could relate to the theory I had learned in my Master’s course.”

Gary. “What was it like then, say on a daily basis, and did you like going to work?”

Christine. “Did I like going to work? Sometimes I did but part of the problem with the middle school was, and this was the principal problem with it, that there was no consultation at the early stage with the other staff or with the parents. There was no clear communication that stated what we were about, this is what we are doing, and we think these might be some of the outcomes. What happened was that the failure to communicate consistently and effectively led to the erosion of the middle school as other staff were not included in the process, they were not made to see that they were a continuation of the process, they were made to feel apart so felt threatened by it, as were parent groups. So they found it very threatening. The problems that I encountered were usually to do with this lack of information, for example the difficulties with certain parents would not have occurred, if we hadn’t a middle school set-up they would not have been able to identify a particular teacher who was,

in their view, responsible for their child's difficulties. They would have had to deal with the school rather than a person. It would not have been as bad as it was."

Gary. *"Do you mean the anger would have been spread more thinly?"*

Christine. "I got the feeling that because it was a new thing it would be easy to criticize."

Gary. *"Yes, it's because you are the principal teacher, like in primary school, anyone who is not happy can identify a person to blame, yet in a traditional high school set-up they might be unhappy but they can't easily personalize the issue. The child might have sixteen different teachers so it's hard to pick on one."*

Christine. "I felt that because of the parents' lack of knowledge and understanding of what we were trying to do, worked against me because I can remember the first parent-teacher night, and it was the only one I can remember where at one point there were eighteen people lined up to see me, where I had to explain exactly what was going on and some of them were, I suppose, really angry. Not specifically with me but with what was going on, what happened then was that I expected support from the management level and that never came."

Gary. *"You know why, and I've only just figured this out recently, there actually was no consistently clear idea of what we were trying to achieve; whether it was a middle school in terms of a type of organization, whether we were talking about a type of curriculum, or a description of the age range of the students. We kept mixing up the terminology."*

Christine. "That's right, there was no school-wide consensus about what we were doing. But that's because we didn't even have time to focus on the broader picture as we were too busy, desperately trying to survive and keep the ideals alive within the middle school environment. It was just never going to happen and eventually you could start to see that this was going to be the case. But there were positive things that came out of it, things like the relationships that I developed with my class, I know I've said it before but that has to be the single most important thing."

Gary. *"You know I think we put ourselves down because really that's what it's all about."*

Christine. "Yes, that, and the collegiality within the middle school team, I had the best time talking about teaching and learning and stuff like that. One interesting time for me was, I didn't realize how much ownership we had, when someone from outside the team came to one of our professional development sessions and was pretty negative about some of our curriculum plans and I felt angry. I also didn't like the visits to the middle school area by the Learning Area Managers who were usually there to see whether we were teaching the subject curriculum or not."

Gary. *" Yes, as grade coordinator, I got pestered mercilessly about Science, whether the students were doing what they normally did in that subject, so that they would know where to start from when the students reached the senior grades, almost whether they had reached a certain page in a certain book."*

Christine. "Yes, that was the thing that I liked, the challenge for the students, getting away from linear thinking, it wasn't like we'll all do this, then that in some sort of logical progression, it was encouraging the students to develop their ideas in all sorts of directions. That was interesting and the other thing I really liked was that it changed my view, that's if I ever really had one, of what learning should be. It's interesting that when we started working with Bevis and Roy we were just talking about things but they actually became real and you were able to reflect on them."

Gary. *"That's right, there were products, public presentations of the work and so on."*

Christine. "So, my idea of learning changed, I really liked the idea of learning being a generative thing, and the importance of critical thinking; making kids think which, in turn, makes you think. You can't very well ask kids to do something and then not do it yourself, you have to demonstrate it."

Gary. *"So, I'd like to ask you what you would have preferred it to have been like."*

Christine. “I would have preferred it if there had been more support from the school’s management, I expected more, support in terms of facilitation and communication to the whole school community and I believe that is why it started to fall apart. It wasn’t communicated well and that was disappointing. The other thing I didn’t like and this is probably due to my own personality, was the way I felt judged by the other school staff it became divisive. But there was a great sense of community within the team, we supported one another, the behavior problems were minimal because we all supported one another, and when you did have a problem you didn’t feel exposed by admitting that there was a problem.”

Gary. “If you could have changed just one thing, what would it have been?”

Christine. “It would have been the provision of the appropriate physical resources, you know, things like alterations to the classrooms, a wet area, study rooms and computers etc. We had the human resources, and they were brilliant, we just needed support from the timetable and some of those physical things and it would have worked brilliantly. I wouldn’t have changed the staff group, and for me, who was instructed to do it, I was so pleased with how it turned out.”

Lynn

Gary. *“Can you remember what you thought working in the Middle School would be like?”*

Lynn. “Well the first thing I thought was that it would be a team that was my first thought and I really like working in teams. You can bounce ideas off each other, support each other and generate a lot of vitality. So I thought it would be like that. I thought for the kids it would be more like an extension of Primary School because it would not be such a huge change and there would be a lot of integrated curriculum to, sort of, break down the subject ‘boxes’ and start generating ideas about what would be good practice for educating young teenagers. That’s basically what I thought it would be like.”

Gary. *“Had you actually have a picture in your head of what it would be like for the students a picture of the environment and what it would feel like to be in that environment ?”*

Lynn. “I thought it would be a team of teachers working with a team of kids, all of them having a sense of belonging with people caring for each other both teachers and students.”

Gary. *“So did you think that this might be different from previous practice?”*

Lynn. “Well, yes I did, before it was very much a stop, start, compartmentalized system. You know, go here, go there, very patchy and I considered that didn’t help my previous groups as even by the time they reached the senior school they still didn’t have any real sense of identity. So I thought a more caring style of teaching, where the kids had fewer teachers and could get to know the ones they did have would be much better. Even simple things like not having to write ‘hundreds’ of reports about students you hardly knew, but fewer, in great depth and detail, had to be an improvement.”

Gary. *“O.K, but what was it actually like to work in the Middle School?”*

Lynn. “Before we go on to that, I would like to say that the school had, supposedly, voted for this after those joint sessions we had over a period of two years. Because of that I expected there to be physical changes within the school to support the new program. There were a couple, in that we were given a dedicated building, but there wasn’t much else to support it. I thought there would be things like the merging of classrooms into shared corridor space and specific ‘wet’ areas and so on. That didn’t happen it was still basically how it had always been, a separate room, a chalkboard in some instances, a teacher some kids and some desks and that was that. So this leads on to what it was really like. There was a lack of communication between us and the rest of the school so it was like a ‘them’ and ‘us’ situation. Basically there was a growing feeling of really not being supported, in fact, being criticized without people bothering to find out what was really happening. I thought the ‘pairing’ of teachers was really good, but our numbers made it difficult, with seven classes there was always going to be one that was organized differently from the others.”

Gary. *“That was a real problem for me as the coordinator, we either needed an extra teacher or I even thought that it might have been better to increase the class size slightly, get rid of one teacher and have six classes, three pairs of teachers, but the Principal and the Assistant Principal in charge of Middle Schooling wouldn’t come at that for political reasons. I still think that was a mistake but there was no way the Principal was going to suggest an increase in class sizes to the School Council.”*

Lynn. “That’s what made it difficult for us to work as a big team, but as ‘pairs’ I really enjoyed that because you could really spark off and get something done, it took a while to get that to happen but that started happening.”

Gary. *“I can appreciate that, I reckon it was the best experience I’ve had in a long time, two classes shared with my partner, it was great we really got to know the kids and could extend them.”*

Lynn. “There were certain things about the timetable that weren’t resolved in that year but should have been fixed for the following year. In retrospect, talking about timetables, do you remember that spare line of negotiated time where the kids didn’t have a commitment to any particular teacher? That was a good one. Other teachers

could have been made more aware that the time was available for them as well, like the Drama teacher could have said 'look I need another lesson' or the Technology teacher could have asked for a coupler to finish a project."

Gary. "Actually, I thought it was a very good idea but it never got floated school wide, it was a fabulous idea , it just went so well to start with, but it gradually faded when the extra staff were no longer available and now it's like it died like it never existed."

Lynn. "I think when I thought what it was going to be like I thought that it might be all like that, a more flexible open timetable but what actually happened was it was still pretty formal in grade seven and then very formal, back to square one in grade eight so there was no flexibility in grade eight. Except for stuff you did in your own time or arrangements you made for a swap with your partner."

Gary. "There was still a degree of internal flexibility if you wanted to use it."

Lynn. "Yes' if you were partnered with a Maths or Science teacher you could do things. One thing I didn't ever see was an assessment or evaluation of the whole thing because it would have been interesting to see if things were any better for the kids or their attitude or progress had improved. Things like, whether their relationships with teachers and other kids were better."

Gary.. "I suggest that there has been progress, that particular grade was no different from any other grade group, there were some with pretty serious educational and behavioral problems, yet it's one of the most settled grades we've ever had. That grade was not a particularly brilliant group so you must have done something right. My experience, as Grade Coordinator is that they are one of most relaxed yet motivated grades I think I've ever come across. It's hard to put a finger on it but something good happened."

Lynn. "I guess that's true, but when it was being set up somebody in a management position, should have worked out how it was going to be monitored and because that

didn't happen we didn't get to say in any formal way what our concerns were and how they might be addressed in future. We didn't actually do it did we?"

Gary. "I tried, half way through grade seven, to present a sort of progress report to the Principal but it was a pretty cold sort of thing, a bit mechanistic, a list of what we had done and what we hadn't done."

Lynn. "And the other disappointing thing was, because we hadn't done it, there was no real overlap between us and the new team that started with the next grade after us, no real sharing of what we had learnt, I thought that was really disappointing. We really didn't try to do it, not that I know of. They did it differently, they had a smaller group."

Gary. "Dare I say, they had it slightly easier, there weren't seven classes for a start. They weren't fighting, tooth and nail, just to establish themselves."

Lynn. "They came up with things that we had discussed but were able to do something with those ideas but we didn't formally share it. So it felt like being excluded from the process yet again, but I don't know how they would see it."

Gary. "What I'm trying to do by asking you these questions is, I guess, trying to make some sense of all this through dialogue because I just came to the conclusion when I tried to evaluate what we were doing, because it was so different you almost couldn't evaluate it, like, in a formal way. You know, designing a questionnaire to compare Literacy or Numeracy levels or something like that because what you're talking about is actually a social change so I came to the conclusion that you really couldn't do it any statistical way, analyze social change with an instrument."

Lynn. "I would have liked it to have been like I thought it was going to be, because that's why I went in to it to start with. But I didn't have any ideas of how it might work as I hadn't really any previous experience of something like that, so are you really asking if I'd change anything?"

Gary. *“Yes I guess anything that with hindsight you may have wished had been different.”*

Lynn. “Well the first thing is I would have liked it to continue as it was in the first year, and develop, instead it sort of fizzled out. The grade seven is almost like it was before, you know, all over the place. Well I’m not really sure, what did you want it to be like?”

Gary. *“It was something to do with, I sort of anticipated that it would be difficult from the start in terms of overall school acceptance, but I didn’t anticipate just how difficult it would be. In some respects I’m really disappointed. I wasn’t present at the early discussions about all this stuff I just wasn’t here so when I arrived here, having done something similar which turned out o.k. at my last school’ I was quite pleased when the Principal asked me if I would be interested in trying to do something similar for this school. He sort of implied that there was strong support for the idea and that staff had gone off to a conference etc, he said that there were still a few difficulties but I agreed to give it a go. It turned out that the difficulties were mostly unresolved.”*

Lynn. “It’s interesting that prior to all that we had worked on an integrated Social-Science and English course, and we had also been working on a grade seven integrated Arts curriculum. All the big money was spent on course development to do with integrated programs, the bulk of the money over four or five years had been spent in this area, so I saw that as an indication that they were moving towards the establishment of an integrated Middle School program. But a lot of the people who had spent the money did not put their hand up to work in the program, so it meant that it was always going to be difficult to develop the grade seven program”

Gary. *“Yes, I must admit that I found it a bit quirky that a number of people who I assumed would be interested just didn’t put themselves forward to be part of the ‘team’, I thought that it was a bit strange.”*

Lynn. “I think that it is so significant that there were three Principals over that period of time, we had one Principal who had gone along with what the staff suggested and

if he had stayed it probably would have become a much better thing. But I really don't know enough about Middle School philosophy to say how it's going in other schools compared to here, but High Schools do have to make some changes"

Gary. "They do, I would say that all this school could really claim is that at the moment it has a good program, a good transition process from grade six, but I don't think it actually has an effective Middle School program, and I find that disappointing. I'd find it even more disappointing if we really had gone back to the old traditional way of doing things but I don't think that has happened either, it's just sort of stuck. Things like the Primary School liaison is done so much more effectively than it might have been before."

Lynn. "Yes but it has been made difficult for the liaison person because the school has made a commitment to Middle Schooling and they have to 'sell' it to parents yet, you know, it's sort of half-baked at best."

Gary. "Sure, but there were some real high points in it, some of the work that was being done was just brilliant, students working together, teachers working together, all of them being challenged, all of that stuff."

Lynn. "And another thing the Humanities teachers had an understanding of what the Maths and Science teachers were doing and vice-versa as well as them being able to take their classes for other things like Art or P.E."

Gary. "I must admit, that although I've been teaching for a long time the thing I did on the exploration of the Solar System, the Humanities, Science, Art thing was probably the best teaching I've ever done at any time and that's entirely due to this program. So I guess that's my ideal version of what it could have been like."

Lynn. "Yes, I agree, but I don't think that's general though, because the school is still faculty oriented. Not many Maths and Science people would know what goes on in Humanities classrooms for example."

Gary. *"I think that's a great pity. But, you know, thinking about the initial organization again, I think it was a mistake, and I don't want it to sound like the wrong people were in it, to just leave it to staff to put their hand up if they were interested. So if your asking me what it should have been like, there should have been, at least, two faculty heads on the 'team', just to break the bottle neck. The problem was that we were trying to develop new curricula and the faculty heads saw that as a threat. But when you talked to them it was more like that they just wanted to be informed. So basically if you want the ideal Middle School, which is actually half of the student population, you would have half of the faculty heads and other senior staff on the 'team'. Your 'team' of perhaps eight could have had three, maybe four, senior staff on it."*

Lynn. "That would mean reorganizing the whole structure of the school basically, you could really do something about the 'them' and 'us' separate school type of thing It's interesting though that at the moment the faculty heads mostly teach the nines and tens. A change like that would actually give the grade some sort of access to the real decision making process in the school."

Gary. *"Yes, well thanks for that, it's certainly something to think about."*

Lynn. "I thought because I haven't, as I said, seen it working anywhere else, apart from the discussions that we've had and the professional developments programs, I felt I was learning about it as it went but then I didn't get enough of a chance to practice it."

Gary. *"Yes, I agree, but there is a writer who writes about educational policy making, and I can't think of his name at the moment, who thinks that you can actually over plan programs, like spending so long developing your aims that you never actually get round to doing anything. He sort of suggests that you can 'ready'- 'fire'- 'aim'. This means that your aims are then developed from your practice, rather than in a vacuum, it makes good sense really. The way I see it, we sort of used an 'aim'- 'aim'- 'fire'- 'fire again' approach which doesn't seem to work particularly well."*

Lynn. “A group of people needs to work together for a longer period of time, to get to know each other and sort out the problems, like I said before, over a two year period. I think the teachers, like me who have been involved in it just stepped back we tried and worked hard at it, but didn’t want to be always fighting for it.”

Gary. “That’s o.k. There’s nothing wrong with that, it’s a bit like the Canada Geese who are able to fly such vast distances because they regularly shift their position in the flock so no individual has to be in the front all the time, when they get a bit tired they drop back a bit and cruise in the slip-stream created by the others until they are rested. Sometimes as educators and teachers that might be the best option for us although we are almost conditioned not to do that, as we like to be seen to be totally committed all the time, my beak was getting a bit bent. But I think that you can still take a leadership role without necessarily being at the front of the flock all the time. It was strange, I came to this school from another with a totally neutral view about all of this yet once the program started it was like it was all my idea, that Middle Schooling was my thing and it wasn’t particularly.”

Lynn. “Yes, the personality of the people involved in it, is an issue, the person who initially got it going was probably not the right person because there was a lot of ill feeling about how it was all set up in the first place.”

Susan

Gary. "I wonder if you could cast your mind back to the first meetings that you attended and I wonder if you could recall what you thought it would be like to work as a member of the Middle School team ?"

Susan. "Well, I think what it was going to be like was, it was an opportunity to work in a High School that was more like a Primary School setting, in that there would be flexibility in the arrangements, i.e., timetable, staffing etc that would allow you to work as a team and allow you to work together on a program that was more integrated in nature and that was the basic structure to work from. So that you could team with a person, you could work on some ideas, a project together, you could plan together, work together, and you could actually share resources. Things like getting people in and guest speakers and bounce ideas off each other that would just be the basic structure you would work from."

Gary. "So what really happened?"

Susan. "The hardest thing I found was to get my actual fellow team-person to come onside, I had lots and lots of ideas however the ideas were Science, environmental stuff, to do with bio-diversity and I had to convince them that it was actually a good idea before they would commit to it. I knew what I wanted to do but I wanted to integrate it with Humanities, I didn't want to do it on my own, if I was going to do it on my own I wasn't going to do it .So I had to kind of wait until they would take the first step and actually try something, so when they started to suggest some ideas I was then able to suggest other ideas so it wasn't all coming from me."

Gary. "So how long did it take to get to that stage do you think?"

Susan. "At least until Easter, it was after Easter I think that we started to move on it so really I suppose in hindsight it wasn't too bad. We started from the text book but then we said 'we're going to get all these experts in, this is totally new', we reviewed it and we evaluated it and changed it and we tried new things. A lot of the things we wouldn't do again but we learned a lot from it."

Gary. *“Do you think that the hesitancy was to do with thinking that there might be a ‘right’ way of doing it?”*

Susan. “No not really.”

Gary *“What about your partner?”*

Susan. “No, I think the reluctance was more to do with the fact that what we were doing was totally different, sort of new and really quite scary, and they had to commit to a subject with which they were not very familiar so it was a big step from what they usually did. Because it came from a Science focus they had difficulty but a lot of the work they were doing already on things like the landscape was Science anyway, they just didn’t see it that way to start with. In the end they came up with lots and lots of exciting ideas.”

Gary. *“Yes its all to do with labeling, labels have such a lot of power, once you put a label on something you give it all sorts of baggage to carry.”*

Susan. “They did a terrific job, but they never wrote it up unfortunately, so we never actually got a document of the Humanities elements of the program, I wrote the Science part. We did it together but we never actually got an integrated document. Some of the Science I did was not integrated anyway, because you can’t do everything, the whole point was to make it realistic and contrived integration of programs would not be worthwhile. It was realistic, it was ‘real’.”

Gary. *“I often wonder if there might be another model of integration floating about that is to do with integration within the subject rather than or as well as integration between subjects. Sometimes that is lacking in schools not only are the subjects compartmentalized from others but they are then sub-compartmentalized into smaller parts like Physics and Biology etc.”*

Susan. “Yes, but what I have found is that I don’t have to rely on somebody else coming over from another part of the school to work with me to provide the expertise I can do it myself. It’s not really an integrated curriculum at all, that’s probably the

wrong word to describe it, it's different it's just a different way of looking at the curriculum."

Gary *"I agree entirely, I've sort of thought that myself but I can't think of another word to describe what it's all about, so I guess, in the meantime I keep using it."*

Susan. "That's right, it's just a word to describe the way in which we are trying to teach the curriculum, a way that's not broken up into too many separate pieces."

Gary. *"I think it's more to do with connections, and it's not like the connections are in straight lines either. There is a word for it somewhere we just haven't got it yet. I was thinking more about convergence, you know all these bits of the curriculum are out there floating around and occasionally they converge and become a sort of 'big idea'. You would have this convergent curriculum where all the bits made perfectly good sense by themselves but when they came together you would get something better than all the bits by themselves. You know, a bit like a Surrealist painting where all the parts are recognizable and accurately painted but they're put together in weird ways."*

Susan. "Yes, I sort of see what you mean but I've just remembered something else, my partner had this idea that everything had to be integrated."

Gary. *"O.K. then, so what would you have liked it to have been like?"*

Susan. "I wanted to look at the big issues not just the facts, things that would make the students aware of what the world is really like. For example one of the questions I asked was about the popularity of Coca Cola, that could be a question in Science but it's more than a Science question, it's the sort of question for kids to consider their own role in supporting the popularity of that product and the social implications of marketing, globalization and so on."

Gary. *"Yes, I see what you mean, it opens up a whole new field for the kids to explore and it's not just things like a particular commercial product."*

Susan. “It’s about who owns the world, it’s about poverty, it’s about the status of third-world countries etc, multinationals and conglomerates and so on. It’s a huge issue so it doesn’t matter whether you tackle it from a Science point of view or not, just tackle it.”

Gary “Yes, the good thing about those sort of topics is that they can’t be restricted to one subject area, they sort of expand beyond that naturally, whether you want them to or not. So for example if most of your Science curriculum was based around these sorts of big issues then it couldn’t conceivably be done in the old style because the topics themselves would not allow it, they would develop a type of life of their own. It might be a way of developing an integrated program by stealth, you see a lot of teachers just want to be told what to do so if you started them off on one of these big issue topics they would, sort of, get carried along with it. You could give a list of those sorts of things you were mentioning to a group of teachers who might actually be quite conservative and say ‘well this is the grade seven Science curriculum’ and I think they would still work out well. They might question it, which would be a good thing because you’ve got them in a conversation already.”

Susan. “It could be a good idea to put up a Science curriculum that just looked like that, not necessarily the topics I talked about but one that didn’t actually mention technical bits about Science at all. They might appear to be Social Science questions but, in fact, would be fantastic basis for a Science curriculum but the trouble is that some Science teachers would be terrified that it was somehow watering-down Science because they are stuck with their traditional view of the Science curriculum and they can’t see that in a lot of cases they are alienating their students.”

Gary. “Sure, but they are really concerned that a lot of good students choose not to continue with the Sciences, they’re really upset about that and would probably respond really well to suggestions of ways to address that. Like in all subject areas there might be a few who don’t care, but not many. I suspect that most people, human nature being what it is, want to do the right thing and if you can acknowledge that you don’t get them offside to start with.”

Susan. “Yes, I would really like the opportunity to run the Science department. I would go along and say that ‘we seem to have a few problems but there is a Commonwealth initiative to do with quality teaching in Science and I would like us to be involved in that.’ As team leader the first thing I would like to do is look at some of our modes of teaching and introduce some of the sorts of topics that we have been talking about and provide a range of activities that would assist them with that. I would take the line that ‘we could do some of these things together, you’ve probably got lots and lots of ideas you’d like to add to this, things you might have done yourself.’ I’d help set them up with materials and help organize other activities etc.”

Gary. “You’re right, that’s not threatening, if you can demonstrate that something is possible most people will give it a go. The trouble is that schools are not usually very good at allowing that to happen because of the way the timetables are organized, most people in a subject department are either all on or all off at the same time and that restricts the opportunities for colleagues to visit your classroom while you are actually teaching. You can’t invite people to see you working or even just casually drop in. It’s interesting because when I asked the Principal about what he liked most about the role he mentioned just that, that as a Principal you are able to do just that, to see your colleagues in action and the kids at work. He reckoned that was just great’ as before he really had no idea of the quality of the work going on around him. Somebody can say ‘I’ve got such and such a class would you like to come and have a look’ and you can, where a colleague, who may really benefit from it, may not be able to.”

Susan. “Yes, just to go into somebody’s classroom and see how they teach differently would be great to see that it’s not that threatening, it’s not that marvelous, it, just slightly different and it’s just about valuing kids and their opinions and what they’ve already learned and giving them the opportunity to develop new stuff. They love it, a simple thing like how can you boil water in a paper saucepan? I’ve never had as much fun as when we did that, you know, designing a container using sticky-tape and paper, one sheet of A4 paper, and some of them did a damn good job. Got it up to over eighty degrees and they were so surprised and excited, but it was just a simple thing really. It was great.”

Gary. *“Yes, there must be a point surely where you must know that things aren’t going well, I refuse to believe that if you’ve got this terminally boring class or classroom that you can be oblivious to it.”*

Susan. “I don’t know, I mean I’ve been into Science classrooms where the kids spend just about all of their time working out of textbooks but their not really doing not much at all, they’re meant to be reading and answering questions but are really not engaged. I said, ‘are they always doing this?’ and they said ‘yeah’ but I still don’t believe it.”

Gary. *“You have to be careful though because sometimes you just get given the answer to match your question, it’s a bit like the Ancient Greeks and the oracle at Delphi. You really have to observe carefully over a longish period before you can make any conclusions and even then you might not be actually drawing the right ones. I’ve been thinking about the ultimate question I could ask myself about my teaching and to remind me I think I’m going to write on my board ‘would I like to be in this class?’ In fact, I think there are only three basic questions to really ask about any classroom environment, quite simply: Would I want to be a student in this classroom? Would I want my own child to be in this classroom? And would I want to be a teacher in this classroom?”*

Susan. “That’s good, if you were really serious you would have that written over every classroom door or make it the school motto or something.”

Appendix 3.

A Selection of the Questions Used in Student Interviews.

1. Can I ask you what you thought High School would be like when you were in grade six?
2. So can you tell me where you think you got those ideas from?
3. Do you think they came with a lot of friends from their other school?
4. Did that bother you in any way?
5. Who were the people who said this stuff?
6. What did the teachers say though?
7. What was your biggest fear then, what made you worry about coming?
8. Could you tell me something about the way the classes were organized?
9. Did you think the work was too easy?
10. Were you disappointed that it wasn't any harder?
11. Can you think back, were your worries sort of fixed?
12. So you spent most of your time in the same class didn't you?
13. I wonder if you could tell me how you formed your views about High School when you were in grade six?
14. Could you just explain a bit more?
15. Were you a bit worried about coming to High School?
16. What was your biggest worry?
17. Where had you got that impression from?
18. What do you think those stories are for, why do those people tell those stories?
19. What about from other kids, do they give you information?
20. What can you tell me about the stories that you heard about the things that were going to happen to you at High School?
21. What did you think of the way the class was organized?
22. I would like to follow up some of these comments that you made, particularly the one about how you expected high school to be 'rugged', why did you think that way?
23. Where did you get these ideas from though, can you remember?
24. Where else did you get your information about High Schools?

25. What did you think it would be like in grade seven?
26. What was your biggest worry about coming to High School?
27. If I could just follow that up, what gave you that idea?
28. When you got to High School, what was it actually like?
29. I would appreciate it if you could try to explain what grade seven was actually like.
30. Could you talk a little bit about the work itself?
31. Can you just tell me a little bit about your grade seven class and if you were able to change things, what you would have liked grade seven to have been like?
32. Perhaps you could now talk about how you would have preferred it to have been like.
33. If you were able to redesign the grade seven class arrangements how would you do it?
34. Could you explain a little about what you said before about the work not being demanding enough to start with?
35. Is there anything about grade seven that didn't work very well or something that, if you were given the chance to redesign it, you would change?

Appendix 4.

Original thesis proposal – application for candidacy. August, 2001.

TITLE. “Driving Mr. Magritte: How Surrealism as a metaphor, may be a useful aid towards understanding how Science and Humanities education might be integrated within the school curriculum.”

ABSTRACT. In my thesis I propose to explore the possibility that Surrealist art, particularly the work of Rene Magritte, may provide an interesting alternative framework for the development of integrated curricula in the Science and Humanities learning areas. I will suggest that the notion of combining different elements, in perhaps unusual ways, yet still retaining the integrity of those elements, may be helpful when designing new teaching programs. The work will review the implementation of a middle school initiative in a traditional high school, using the observations of the students and teachers involved and a detailed study of a specific Grade Eight Humanities/Science project, using a classroom-environments survey instrument.

CHAPTER SUMMARY.

Chapter one. *Mettre le contact a la position ‘marche’.*

This is about explaining the problem and how Magritte’s work might be a helpful metaphor to explore some solutions.

Chapter two. *The dolphins form a pod.* The middle school experience, what we would like to happen, comments and observations from a group of students about to implement a middle school program in a traditional high school.

Chapter three. *Surrealist wind-chimes.* A ‘different’ sort of Physics lesson. It is about raising students’ awareness and the capacity to think creatively and philosophically.

Reinterpreting Dewey, a cautionary note regarding Vocational education, ‘hands on / minds on.’

Chapter four. *There are polar bears in the road. “When you pick a flower in the Amazonian rainforest, a polar bear shivers.”* The middle school experience, what actually happened. Minor changes and unforeseen major consequences.

Chapter five. This is a bit risky but, to be consistent with my surrealist theme I am contemplating having no chapter five. Perhaps chapter ten could be sixth in order, chapters might be in some random sequence or there could be no chapters at all. It could be one continuous text, no contents page, prologue, epilogue and so on. The reference section, if I have one, might be colour-coded and placed in the middle of the text, making it easier for the reader to use.

Chapter six. *“La route est belle, grace a elle.”* Andre Bauge (1932) Continuing conversation with Rene Magritte about the problems of maintaining change in the face of traditionalist opposition and how we might locate innovation in main-stream consciousness whilst preventing from becoming a new form of conservatism.

Chapter seven. *“Time Transfixed.”* Rene Magritte (1939) A retrospective study of based on student responses to a specific integrated Humanities / Science program, which also investigates the difficulties of temporality in educational research.

Chapter eight. *“La Reproduction Interdite.”* (1937-39) Reflections on reflections; the middle school experience; what would we have liked to have happened? Students and teachers observations about what they would have liked the program to have been like.

Chapter nine. *The Pope’s astronomer, Cardinal Bellarmine.* This is about the difficulty of gaining and maintaining support and approval for real rather than theoretical actions. And the grounds on which we either continue or withdraw that approval. How sometimes the reasons for disapproval are not quite what they seem.

Chapter ten. *Max Planck agonises over his decision: Oppenheimer has no idea.* This explores the difficulties faced when we believe something to be correct but know that our proposition will be challenging, threatening, or even personally hurtful to our colleagues. The dangers of innovation without regard for the consequences.

OBJECTIVES.

To describe the progress of a middle school initiative in a traditional High School and to discuss the possibility of developing a new form of debate about the school curriculum that is neither conservative nor progressive.

BACKGROUND.

The sorts of questions that intrigue me are to do with the compartmentalization of knowledge in a broad sense such as; Artistic, Literary, Scientific, and so on , and the internal compartmentalization that occurs, Biology, Physics, and Chemistry for example. This seems to be reflected in Margaret Wheatley's (1992) writing about world views and how they might influence the way organizations, including schools, are structured. I'm interested in why this is so. It appears to be a phenomenon, dating from the industrial revolution, for clearly Leonardo, Michaelangelo, Galileo, and their contemporaries did not consider themselves to be specifically architects, artists, scientists, philosophers or astronomers. So, perhaps it would be timely to consider a contemporary version of a Renaissance education perhaps even using another Art metaphor. I find the Surrealists to be a fascinating art movement and feel that their work may possibly help us to discover a way of packaging educational programs that preserve the integrity of the compartments or subjects yet, still allow for the rich and perhaps strange possibilities of an integrated curriculum; something that through a recombination or different combinations of disciplines might create a more interesting and challenging whole. A new world view that is neither Newtonian nor Quantum Physics, or in Art terms, is neither Classical nor Abstract Expressionism. Perhaps something that has a bit of both; something different that by its very nature raises new questions but is still recognizable; or, at least, its components are. As educators we may be able to confound our critics in the same way that the Surrealists did with theirs. It was difficult to criticize the artists because their work was technically excellent whether it was Film, Photography, Literature or Art. It was executed with great attention to detail, the real things were 'real' (often more 'real' than the in the work of the "Old Masters") it's just that they were put together in unusual and challenging ways, they could not dismiss them as "Fauves" or their work as the random daubing or scribbling of lunatics or children. Perhaps the "Surreal Curriculum" would be easier to sell to conservative colleagues than the "Jackson Pollack, Blue Poles version" which often frightens them into angry, terrified responses and a determination to oppose and undermine the initiative at

every opportunity. Rather than using the “Surrealist” metaphor in a general sense I intend to use the work of Rene Magritte, in particular, as an analogy for my proposed new view of the curriculum.

“ Magritte is a genuine Surrealist in so far as he combines incongruous elements and reveals the strangeness lurking behind the most familiar things.....the elements are deliberately chosen and combined with a view to their didactic power, they are the outcome of a train of thought, the problem in mind never being lost sight of. It is the problem of knowledge – that, more exactly, of the relation between the representation and the world.” (Picon.1977).

Our curriculum or individual units of work might look like the Magritte painting (*Time Transfixed*, 1939.), each element faithfully rendered with complete accuracy and faultless technical skill, retaining its own fundamental integrity. The train is a train, the fireplace a fireplace, the clock is a clock each makes sense in its own right, but the strange combination raises questions and somehow enriches all the images. It is clearly more than a sum of its parts. Therefore, in a curriculum sense the Science would be ‘real’, demanding and technically excellent as would the English or Art or whatever, but the combination or re-combination would lead to the creation of something more interesting and challenging than the original components, subjects, in isolation.

SIGNIFICANCE. The possibility of using an ‘Art’ metaphor to provide a different ‘frame’ for educational dialogue could be particularly valuable as it may allow participants (protagonists) to retain their core beliefs (world views) and engage in risk free discussions about possibilities for curriculum improvement, removing the ‘either-or’ factor from the debate and replacing it with an element of ‘as well’.

RESEARCH METHODS. A combination of quantitative and qualitative research methods including statistical survey instruments, written observations from teachers and students, transcripts of audio-taped interviews, professional reading, my own personal journal notes and reflections on those readings and journal entries.

ETHICAL ISSUES. Informed consent. Participants in this project, both teaching staff and students, will have given permission for their responses and comments to be

used in this research document. The principal of the school gave their approval and became a participant through conversations about teaching and learning.

Feedback. The principal, teachers and students will be informed of progress and regularly invited to comment on their interpretation of the data collected.

Anonymity. I do not propose to publish the location of the particular school used in my research project, teaching staff and student names will not be used, being replaced with pseudonyms for the purposes of continuity in the statistical and narrative aspects of the study.

Truth and Validity. The questionnaires will be modifications of existing statistical instruments that have proven to be reliable and valid. The qualitative data collection and reflective writing will be undertaken in a professional and ethical manner in an attempt to maintain its truthfulness, and to develop the best interpretation possible. I am mindful of Peshkin's observation that, "I conclude my work with the best construction I can create, trusting that I have steered clear of such self-deception and self-delusion that would undermine my commitment to the reason, logic, coherence and the like that I strive for. Lacking formal, internal tests that would substantiate the worthiness of my interpretations." (Peshkin. 2000 p 9)

FACILITIES AND RESOURCES. No special resources or specialised facilities will be required to complete this work.

DATA STORAGE. Data of a qualitative and quantitative nature will be stored electronically on my own computer and on computer discs while I am engaged in my research program. Files will be maintained for five years after which time they will be destroyed. Questionnaire responses, student and staff written comments, transcripts of taped interviews and audio tapes will be destroyed at the conclusion of the study.